

4K90-35

AN ESTIMATE OF THE 1989 KODIAK MANAGEMENT AREA
SALMON CATCH, ESCAPEMENT, AND RUN NUMBERS
HAD THERE BEEN A NORMAL FISHERY
WITHOUT THE EXXON VALDEZ OIL SPILL

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INTRODUCTION

On 24 March 1989 the M/V EXXON VALDEZ ran aground on Bligh Reef in Prince William Sound and spilled approximately 11 million gallons of Alaska North Slope crude oil. A significant amount of the spillage went into the Gulf of Alaska and into the Kodiak Management Area (Figure 1). To protect against gear and product contamination, nearly the entire management area was closed for commercial salmon fishing (Barrett and Monkiewicz 1989 and Malloy 1989).

In late October 1989, the Alaska Department of Fish and Game (ADF&G) estimated what the catch and escapement distribution of the 1989 Kodiak Management Area (KMA) local salmon runs would have been had there not been restrictions from the oil spill. The estimates were preliminary and did not include any interception (non-local) and hatchery fish which may have been harvested in the course of normal KMA salmon fisheries. Stocks which were not included were: 1) Upper Cook Inlet sockeye salmon from North Shelikof Strait; 2) Chignik River sockeye salmon which traditionally are assumed to represent 80% of the pre July 26 Cape Igvak Section catch (20% of the Cape Igvak Section catch is considered local KMA fish); and 3) pink salmon returning to the Kitoi Bay hatchery.

The purpose of this report is to finalize the 1989 KMA escapement, catch, and run estimates and define the methodology used to derive them. Although the methods did not change, additional and better edited data were used in computing the final estimates that were not available at the time the preliminary estimates were made. For example many late 1989 escapement survey counts were not on the data base at the time the preliminary estimates were computed. The additional

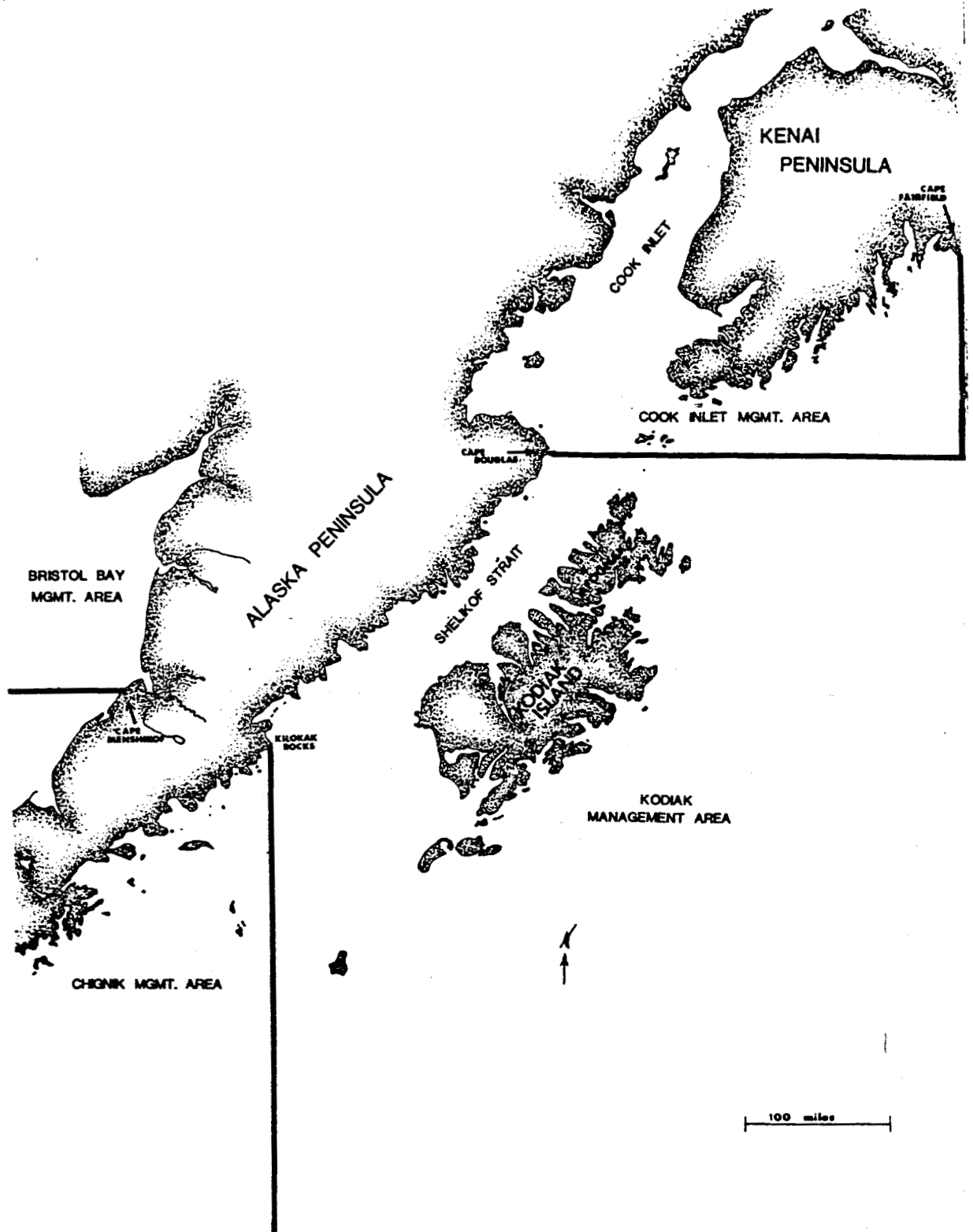


Figure 1. Map identifying the Kodiak Management Area.

editing involved rechecking historic data bases and the 1989 escapement count files for data entry errors. The escapement goals used did not change except for the pink salmon goal which was recalculated based upon index escapement (peak count) goals for 51 selected streams.

METHODS

All catch numbers reported herein were taken from ADF&G, Division of Commercial Fisheries fish ticket summary reports available through late September 1990 at the Kodiak office. The escapement numbers used were current to the same date. A copy of the escapement survey data is in Appendix A.

Sockeye Salmon

Sockeye escapements were counted through weirs on 16 systems (Appendix A.1) and by aerial and ground surveys on 316 other systems (Appendix A.2). The counts obtained from weirs were treated as total escapement counts (Appendix A.1), while the peak aerial counts (Appendix A.2 and A.3) were expanded by a factor of 2.0 for an estimate of total escapement (Barrett et al. 1985).

The 1989 KMA sockeye run was determined from the sum of the estimated total escapement and the actual catch.

The 1989 KMA sockeye catch had there not been the spill was estimated based on the assumptions that: (1) the sockeye run would be managed for a total escapement which was mid point (1,931,000 fish) between the minimum (1,482,000 fish) and desired (2,380,000 fish) escapement goals (Table 1); (2) any fish, in the run, surplus to the escapement goal mid point would be caught; and (3) the run estimate would automatically account for the assumed 20% local stock component of any pre-July Cape Igvak Section catch since the foregone component would be observed elsewhere in the KMA as local escapement and catch.

Pink Salmon

Pink escapements into 16 systems were counted through weirs, and these counts were treated as total escapement numbers. Escapements into 316 other streams without weirs were periodically counted by aerial and ground surveys conducted from late June through 26 September (Appendix A.2). Total escapement for these systems was calculated using the Johnson and Barrett (1988) model. With the model a spawner abundance curve, representing the number of live fish counted over time, was electronically generated for each surveyed stream. Total pink escapements were then determined from the area under the curves using an assumed 15.0 day (d) average stream life except for the Afognak Island streams where an 8.44 d average stream life was applied (Cousens et al. 1982; Johnson and Barrett 1988). The exceptions were: (1) a peak count was used for the escapement estimate when the peak count exceeded the estimate obtained from the Johnson and Barrett model (1988); and (2) for those streams which were only surveyed once,

Table 1. Sockeye salmon escapement goals by spawning system for the Kodiak Management Area.

Name	System Number	Escapement (in 1,000's of fish)		
		Minimum	Mid Pt.	Desired
Weirs:				
Karluk	255-101	560	730	900
Ayakulik	256-201	200	250	300
Upper Station	257-304	200	238	275
Frazer	257-401	140	170	200
Litnik	252-342	40	50	60
Saltery	259-415	20	30	40
Pauls	251-831	20	30	40
Thorsheim	251-302	5	8	10
Buskin	259-211	10	13	15
Akalura	257-302	40	50	60
subtotal		1,235.0	1,567.5	1,900.0
Non weir (indexed escap.^a)				
Barabara Cove	259-363	1	3	5
Bear Lake	262-655	1	3	5
Big Bay	251-601	1	3	5
Horse Marine	257-402	5	8	10
Kafliia	262-301	15	20	25
Kaguyak	258-706	0.5	1	1
Kanatak	262-802	1	3	5
Kuliak	262-351	1	3	5
Little Afognak	252-319	1	3	5
Little Danger	252-331	1	1	1
Little Kitoi	252-323	1	1	1
Little River	253-116	15	20	25
Long Lagoon Cr.	251-301	1	3	5
Malina	251-105	5	8	10
Matfay	257-704	0.5	1	1
Miam	259-412	1	3	5
Ocean Beach	258-401	5	8	10
Old Red River	258-202	0.5	1	1
Paramonof	251-301	1	1	1
Pasagshak	259-411	1	3	5
Perenosa	251-825	5	8	10
Pivot Point	258-212	0.5	1	1
Red Fox	251-505	1	1	1
Russian Harbor	258-901	1	1	1
Selief	251-101	1	3	5
Silver Salmon	257-303	1	3	5

-Continued-

Table 1. (page 2 of 2)

Name	System Number	Escapement (in 1,000's of fish)		
		Minimum	Mid Pt.	Desired
Swikshak	262-151	15	20	25
Slough Crk.	262-105	0.5	1	1
Uganik Lake	253-122	40	50	60
Total indexed escap. ^a		123.5	181.8	240.0
Estimated total escape- ment for indexed systems ^b		247.0	363.5	480.0
Estimated total escapement for systems with weirs and indexed by aerial surveys		1,482.0	1,931.0	2,380.0

^a Indexed escapement represents a peak aerial escapement count.

^b Indexed escapement expanded by a factor of 2.0 for an estimate of total escapement (Barrett et al. 1985).

the live count was expanded by a factor of 1.90 unless the combined live and carcass count on the single survey exceeded the expanded live fish count. In those instances the combined live and carcass count was used for an estimate of total escapement. The expansion factor of 1.90 was determined by: (1) summing the estimated total escapement numbers for those streams having a peak count that was preceded and followed by at least one escapement survey count; and (2) then dividing this sum by the combined peak count for the same streams (Appendix A.4).

The stream life value used for Afognak District streams of 8.44 d is the mean of the average pink stream life values for Litnik (8.54 d for a 7,477 fish escapement) and East Paramanof (8.33 d for a 20,561 fish escapement) Creeks determined in 1989. At these streams in 1989 the daily pink escapement was counted through a weir, and approximately every three days the number of live pink salmon upstream of the weir were counted on foot. The average stream life was calculated by dividing the cumulative number of live fish days above the weir for the season by the total escapement counted through the weir for the season. The cumulative number of fish days was determined from the foot survey count data. Because of climatological, physical, and run timing differences between Afognak Island and the rest of the KMA, the Afognak stream life data was not considered representative for pink salmon beyond the Afognak District. For the non Afognak District segment of the KMA a 15.0 d stream life was used. This value, which has been consistently used for estimating total Kodiak pink escapements since 1986, is based on the professional judgement of area staff and falls within the range of average stream life values cited in the literature (Perrin and Irvine 1990).

Of the 454 known pink streams in the KMA, 122 of these were not surveyed for escapement in 1989. Total escapement to these uncounted streams was estimated from 1969-87 odd-year escapement distribution data which indicate that these streams average 6.33% of the total KMA escapement (Appendix B).

On odd-numbered years, the KMA index escapement goal mid point is 2,020,000 pink salmon (Table 2). The index goal covers eight systems where escapement is counted through weirs and 43 systems where escapement is counted by ground and aerial surveys. The index escapement goal for systems where the escapement is counted without weirs represents peak escapement survey counts. Since a peak count is a fraction of the total escapement (Cousens et al. 1982), the peak count goals were expanded to an estimate of total escapement. The expansion factor applied was 1.84, derived by dividing the estimated 1989 total escapement for all surveyed streams by the sum of the 1989 peak counts for the same systems. The index escapement goal mid point expanded to an estimate of total escapement represents 3,395,440 fish to the 51 index streams. Based on 1969-87 odd-year escapement distribution data the 51 streams average 72.70% of the total KMA pink escapement. Given this relationship, the mid point goal for the entire KMA expanded to total escapement is an estimated 4,670,506 pink salmon (Appendix B; Table 2).

The 1989 total estimated pink salmon run, in numbers of fish, was determined by the grand sum of the actual commercial catch and the estimated total escapements to the 316 streams counted by ground and aerial surveys, 122 unsurveyed streams, and 16 streams with weirs.

Table 2. Pink salmon odd and even year index stream escapement goals, estimated odd year index stream total escapement goals and the estimated total odd year escapement goals by stream for the Kodiak Management Area.

Index Stream	Stream Number	Even Year		Odd Year				
		Indexed ^a		Indexed ^a		Est. Total		
		Minimum	Desired	Minimum	Desired	Minimum	Desired	Mid Point
AFOGNAK DISTRICT								
Malina	(251-105)	20,000	60,000	5,000	15,000	9,209	27,626	18,418
Paramanof	(251-404)	10,000	30,000	5,000	15,000	9,209	27,626	18,418
Little Waterfall ^b	(251-822)	15,000	45,000	15,000	45,000	15,000	45,000	30,000
Discoverer	(251-830)	20,000	60,000	20,000	60,000	36,835	110,506	73,671
Pauls Bay ^b	(251-831)	3,000	9,000	3,000	9,000	3,000	9,000	6,000
Seal Bay	(251-901)	5,000	15,000	5,000	15,000	9,209	27,626	18,418
Big Danger	(252-332)	15,000	45,000	10,000	30,000	18,418	55,253	36,835
Marka	(252-334)	30,000	90,000	10,000	30,000	18,418	55,253	36,835
Litnik ^b	(252-342)	30,000	90,000	10,000	30,000	10,000	30,000	20,000
Subtotal		148,000	444,000	83,000	249,000	129,297	387,891	258,594
N.W. KODIAK DISTRICT								
Sheratin	(253-371)	15,000	45,000	10,000	30,000	18,418	55,253	36,835
Baumans	(253-333)	5,000	15,000	5,000	15,000	9,209	27,626	18,418
Terror	(253-331)	40,000	120,000	30,000	90,000	55,253	165,759	110,506
Uganik	(253-122)	80,000	240,000	70,000	210,000	128,923	386,770	257,847
Little	(253-115)	40,000	120,000	15,000	45,000	27,626	82,879	55,253
Zachar	(254-301)	40,000	120,000	20,000	60,000	36,835	110,506	73,671
Browns	(254-204)	40,000	120,000	5,000	15,000	9,209	27,626	18,418
Uyak	(254-202)	50,000	150,000	50,000	150,000	92,088	276,264	184,176
Uyak	(259-203)	5,000	15,000	15,000	45,000	27,626	82,879	55,253
Subtotal		315,000	945,000	220,000	660,000	405,188	1,215,563	810,376
S.W. KODIAK DISTRICT								
Karluk ^b	(255-101)	800,000	1,600,000	20,000	60,000	20,000	60,000	40,000
Sturgeon	(256-401)	50,000	150,000	5,000	15,000	9,209	27,626	18,418
Ayakulik ^b	(256-201)	400,000	800,000	5,000	15,000	5,000	15,000	10,000
Subtotal		1,250,000	2,550,000	30,000	90,000	34,209	102,626	68,418
ALITAK DISTRICT								
Narrows	(257-401)	2,000	6,000	2,000	6,000	3,684	11,051	7,367
Dog Salmon ^b	(257-403)	50,000	150,000	60,000	180,000	60,000	180,000	120,000
Deadman	(257-502)	40,000	120,000	60,000	180,000	110,506	331,517	221,012
Humpy	(257-701)	70,000	210,000	90,000	270,000	165,759	497,276	331,517
Subtotal		162,000	486,000	212,000	636,000	339,948	1,019,844	679,896
N.E. KODIAK DISTRICT								
Sid Olds	(259-242)	30,000	90,000	30,000	90,000	55,253	165,759	110,506
American	(259-231)	30,000	90,000	30,000	90,000	55,253	165,759	110,506
Buskin ^b	(259-211)	60,000	180,000	50,000	150,000	50,000	150,000	100,000
Subtotal		120,000	360,000	110,000	330,000	160,506	481,517	321,012

-Continued-

Table 2. (page 2 of 2)

Index Stream	Stream Number	Even Year		Odd Year				
		Indexed ^a		Indexed ^a		Est. Total		
		Minimum	Desired	Minimum	Desired	Minimum	Desired	Mid Point
EASTSIDE KODIAK DISTRICT								
7-Rivers	(258-701)	40,000	120,000	40,000	120,000	73,671	221,012	147,341
Kaiugnak	(258-542)	10,000	30,000	10,000	30,000	18,418	55,253	36,835
Barling	(258-522)	30,000	90,000	30,000	90,000	55,253	165,759	110,506
Kiliuda	(258-207)	20,000	60,000	10,000	30,000	18,418	55,253	36,835
Saltery ^b	(259-415)	20,000	60,000	30,000	90,000	30,000	90,000	60,000
Miam	(259-412)	20,000	60,000	10,000	30,000	18,418	55,253	36,835
Hurst	(259-414)	10,000	30,000	10,000	30,000	18,418	55,253	36,835
Subtotal		150,000	450,000	140,000	420,000	232,594	697,782	465,188
MAINLAND KODIAK DISTRICT								
Big River	(262-152)	10,000	30,000	10,000	30,000	18,418	55,253	36,835
Village	(262-153)	15,000	45,000	15,000	45,000	27,626	82,879	55,253
Cape Chiniak	(262-205)	5,000	15,000	3,000	9,000	5,525	16,576	11,051
Big Hallo	(262-203)	2,000	6,000	2,000	6,000	3,684	11,051	7,367
Kukak	(262-271)	3,000	9,000	2,000	6,000	3,684	11,051	7,367
Missak	(262-402)	5,000	15,000	3,000	9,000	5,525	16,576	11,051
Kinak	(262-451)	20,000	60,000	20,000	60,000	36,835	110,506	73,671
Geographic	(262-501)	4,000	12,000	4,000	12,000	7,367	22,101	14,734
Dakavak	(262-551)	25,000	75,000	20,000	60,000	36,835	110,506	73,671
Kashvik	(262-604)	25,000	75,000	25,000	75,000	46,044	138,132	92,088
Big Alinchak	(262-651)	30,000	90,000	20,000	60,000	36,835	110,506	73,671
Portage	(262-702)	15,000	45,000	10,000	30,000	18,418	55,253	36,835
Oil	(262-751)	15,000	45,000	10,000	30,000	18,418	55,253	36,835
Jute	(262-801)	2,000	6,000	1,000	3,000	1,842	5,525	3,684
Kanatak	(262-802)	10,000	30,000	10,000	30,000	18,418	55,253	36,835
Big Creek	(262-851)	70,000	210,000	60,000	180,000	110,506	331,517	221,012
Subtotal		256,000	768,000	215,000	645,000	395,979	1,187,937	791,958
GRAND TOTAL		2,401,000	6,003,000	1,010,000	3,030,000	1,697,720	5,093,161	3,395,440
Est. Total Kodiak Management Area Escapement ^c						2,335,253	7,005,759	4,670,506

^aIndex escapement for non weir systems are peak counts.

^bSystems where the escapement is counted through weirs.

^cThe 51 listed index streams average 72.70% of the total KMA escapement based on 1969-87 odd year escapement distribution data. The estimated total KMA escapements are derived by expanding the minimum desired, and mid point total estimated escapements for the index streams by a factor of 1.38.

The 1989 pink catch, in numbers of fish, had there not been the oil spill was determined by subtracting the mid point escapement goal (4,670,506 fish) from the 1989 run estimate.

Chum Salmon

In 1989 chum escapement into 16 systems was counted through weirs (Appendix A.1), and these weir counts were treated as total escapement numbers. For the 316 streams where escapement was counted by aerial and ground surveys, total chum escapement was calculated using the Johnson and Barrett (1988) model and a 15.0 d stream life estimate. The 15.0 d stream life value has been used for the KMA since 1986, and is based on the professional judgement of area staff and falls within the range of average stream life values cited in literature (Perrin and Irvine 1990). The exceptions were: (1) a peak count was used for the escapement estimate if the peak count exceeded the estimate obtained from the Johnson and Barrett model (1988); and (2) for any stream which was only surveyed once the live fish count was expanded by a factor of 1.29 for total escapement estimate unless the combined live and carcass count exceeded the expanded live fish count. In those instances, the combined live and carcass count was used for an estimate of total escapement. The expansion factor of 1.29 was determined by: (1) summing the estimated total escapement numbers for those streams having a peak count that was preceded and followed by at least one escapement survey count; and (2) then dividing this sum by the combined peak count for the same streams (Appendix A.5). There was no estimate made of chum escapement to the 122 unsurveyed streams in 1989 because there are no historic records of chum escapement for these streams

(L.M. Malloy, Alaska Department of Fish and Game, Kodiak, personal communication).

The KMA chum index escapement goal is 510,000 fish for the minimum level and 1,530,000 fish for the desired level (Table 3). The index goal covers two systems where escapement is counted through weirs and 76 systems where escapement is counted by ground and aerial surveys. The index escapement goal for systems where the escapement is counted other than through weirs represents peak escapement survey counts. Since a peak count is a fraction of the total escapement (Cousens et al. 1982), the peak count goals were expanded to an estimate of total escapement. The expansion factor applied was 1.39, derived by dividing the estimated 1989 total escapement for all surveyed streams by the sum of the 1989 peak counts for the same systems. The index escapement goal expanded to an estimate of total escapement is 707,764 fish at the minimum level and 2,123,291 fish at the desired level. In 1989, 90.2% of the total KMA chum escapement was to the 78 index escapement streams. Based on this distribution the total KMA escapement goal for all streams is an estimated 784,440 fish for the minimum level and 2,353,321 fish for the desired level (Table 3).

The estimated total 1989 chum escapement, in numbers of fish, was determined by combining the estimated total escapement to the 316 streams where escapement was counted by ground and aerial surveys and the cumulative escapement count for the 16 streams where escapement was counted through weirs. The estimated total 1989 chum run, in numbers of fish, was determined by the sum of the combined actual catch and the estimated total escapement.

Table 3. Chum salmon indexed escapement goals and estimated total escapement goals for selected streams.

Index Stream	Stream Number	Indexed		Est. Total		
		Minimum	Desired	Minimum	Desired	Mid Point
N.W. KODIAK DISTRICT						
Red Cloud	(259-382)	3,000	9,000	4,173	12,518	8,345
Slough Trail	(259-383)	1,000	3,000	1,391	4,173	2,782
Sheratin	(259-371)	5,000	15,000	6,954	20,863	13,908
Kizhuyak	(259-365)	8,000	24,000	11,127	33,380	22,253
Terror	(253-331)	5,000	15,000	6,954	20,863	13,908
Uganik	(253-122)	10,000	30,000	13,908	41,725	27,817
Spiridon	(254-401)	15,000	45,000	20,863	62,588	41,725
Zachar	(254-301)	15,000	45,000	20,863	62,588	41,725
Uyak	(254-202)	10,000	30,000	13,908	41,725	27,817
Subtotal		72,000	216,000	100,140	300,421	200,281
S.W. KODIAK DISTRICT						
Sturgeon	(256-401)	50,000	150,000	69,542	208,626	139,084
Subtotal		50,000	150,000	69,542	208,626	139,084
ALITAK DISTRICT						
Big Sukoi	(257-102)	20,000	60,000	27,817	83,450	55,633
Dog Salmon ^a	(257-403)	2,000	6,000	2,000	6,000	4,000
Narrows	(257-401)	2,000	6,000	2,782	8,345	5,563
Deadman	(257-502)	5,000	15,000	6,954	20,863	13,908
Salua	(257-603)	8,000	24,000	11,127	33,380	22,253
Portage	(257-601)	1,000	3,000	1,391	4,173	2,782
Subtotal		38,000	114,000	52,070	156,210	104,140
N.E. KODIAK DISTRICT						
Kalsin River	(259-243)	1,000	3,000	1,391	4,173	2,782
Sid Olds	(259-242)	6,000	18,000	8,345	25,035	16,690
American	(259-231)	6,000	18,000	8,345	25,035	16,690
Salt	(259-233)	2,000	6,000	2,782	8,345	5,563
Salonie Creek	(259-223)	1,000	3,000	1,391	4,173	2,782
Russian River	(259-222)	2,000	6,000	2,782	8,345	5,563
Sargent Creek	(259-221)	2,000	6,000	2,782	8,345	5,563
Subtotal		20,000	60,000	27,817	83,450	55,633
EASTSIDE KODIAK DISTRICT						
Sitkinak Chum	(258-807)	3,000	9,000	4,173	12,518	8,345
Kaguyak	(258-602)	5,000	15,000	6,954	20,863	13,908
Kiavak Portage	(258-551)	1,000	3,000	1,391	4,173	2,782
Kaiugnak	(258-603)	3,000	9,000	4,173	12,518	8,345
Barling	(258-522)	3,000	9,000	4,173	12,518	8,345
Midway	(258-521)	5,000	15,000	6,954	20,863	13,908
Newman	(258-513)	3,000	9,000	4,173	12,518	8,345
Natalia	(258-512)	3,000	9,000	4,173	12,518	8,345
Rolling	(258-511)	4,000	12,000	5,563	16,690	11,127
Amee	(258-301)	1,000	3,000	1,391	4,173	2,782
McCord Beach	(258-302)	1,000	3,000	1,391	4,173	2,782
Pivot Point	(258-212)	1,000	3,000	1,391	4,173	2,782
Marker Grove	(258-211)	1,000	3,000	1,391	4,173	2,782
Dukaluk	(258-208)	2,000	6,000	2,782	8,345	5,563
W. Kiliuda	(258-207)	8,000	24,000	11,127	33,380	22,253

-Continued-

Table 3. (page 2 of 2)

Index Stream	Stream Number	Indexed		Est. Total		
		Minimum	Desired	Minimum	Desired	Mid Point
E. Kiliuda	(258-206)	3,000	9,000	4,173	12,518	8,345
Burn's Spit	(258-210)	1,000	3,000	1,391	4,173	2,782
Coxcomb Point	(258-205)	6,000	18,000	8,345	25,035	16,690
Dog Bay	(258-204)	6,000	18,000	8,345	25,035	16,690
Shearwater	(258-202)	1,000	3,000	1,391	4,173	2,782
Gull Cape	(259-428)	8,000	24,000	11,127	33,380	22,253
Eagle Harbor	(259-424)	4,000	12,000	5,563	16,690	11,127
Kiliuda Pass	(259-423)	2,000	6,000	2,782	8,345	5,563
Hidden Basin	(259-418)	4,000	12,000	5,563	16,690	11,127
Wild Creek	(259-417)	2,000	6,000	2,782	8,345	5,563
Rough Creek	(259-416)	3,000	9,000	4,173	12,518	8,345
Saltery ^a	(259-415)	2,000	6,000	2,000	6,000	4,000
Miam	(259-412)	2,000	6,000	2,782	8,345	5,563
Subtotal		88,000	264,000	121,612	364,836	243,224

MAINLAND KODIAK DISTRICT						
Productive Forks	(262-108)	1,000	3,000	1,391	4,173	2,782
Swikshak	(262-151)	2,000	6,000	2,782	8,345	5,563
Big River	(262-152)	40,000	120,000	55,633	166,900	111,267
Village Creek	(262-153)	10,000	30,000	13,908	41,725	27,817
Chiniak Lagoon	(262-154)	8,000	24,000	11,127	33,380	22,253
Ninagiak	(262-201)	5,000	15,000	6,954	20,863	13,908
Serpent	(262-203)	10,000	30,000	13,908	41,725	27,817
Cape Chiniak	(262-205)	1,000	3,000	1,391	4,173	2,782
Kukak River	(262-271)	60,000	180,000	83,450	250,351	166,900
Kukak Valley	(262-272)	3,000	9,000	4,173	12,518	8,345
Kinak Creek	(262-451)	2,000	6,000	2,782	8,345	5,563
Dakavak	(262-551)	10,000	30,000	13,908	41,725	27,817
Alagogshak	(262-602)	25,000	75,000	34,771	104,313	69,542
Kashvik	(262-604)	5,000	15,000	6,954	20,863	13,908
Big Alinchak	(262-651)	2,000	6,000	2,782	8,345	5,563
Little Alinchak	(262-652)	1,000	3,000	1,391	4,173	2,782
East Bear	(262-654)	8,000	24,000	11,127	33,380	22,253
West Bear	(262-656)	3,000	9,000	4,173	12,518	8,345
Portage	(262-702)	1,000	3,000	1,391	4,173	2,782
Teresa	(262-703)	8,000	24,000	11,127	33,380	22,253
Trail Creek	(262-704)	8,000	24,000	11,127	33,380	22,253
Dry Bay	(262-752)	8,000	24,000	11,127	33,380	22,253
Jute	(262-801)	1,000	3,000	1,391	4,173	2,782
Kanatak	(262-802)	1,000	3,000	1,391	4,173	2,782
Big Creek	(262-851)	10,000	30,000	13,908	41,725	27,817
Kialagvik	(262-858)	8,000	24,000	11,127	33,380	22,253
Icy Peak	(262-859)	1,000	3,000	1,391	4,173	2,782
Subtotal		242,000	726,000	336,583	1,009,748	673,165

GRAND TOTAL		510,000	1,530,000	707,764	2,123,291	1,415,528

Estimated Total Kodiak Management Area Escapement ^b				784,440	2,353,321	1,568,881

^aSystems where the escapement is counted through weirs

^bThe 78 listed index streams supported 90.2% of the total KMA chum escapement in 1989. The estimated total KMA escapement goal minimum, desired, and mid point values were determined from this relationship.

The 1989 chum catch had there not been the oil spill was estimated by subtracting the minimum escapement goal (Table 3) from the 1989 run estimate. Rather than the midpoint or desired goal, the minimum escapement goal was used because annual (1977- 88) chum escapements more closely approximate the lower end of the escapement goal than the midpoint or upper end of the escapement goal (Appendix C.5). Since KMA chum salmon have been typically managed secondary to pink salmon and 1990 was a record high pink run, the chum escapement in 1990 likely would have been relatively low and the catch relatively high proportional to the strength of the run.

Coho Salmon

The 1989 coho escapement was estimated by expanding the total estimated escapement into nine stream systems, with weirs, by a factor of 3.26 (Appendix A.1). The nine streams are: Karluk, Red (Ayakulik), Dog Salmon, Upper Station, Akalura, Saltery, Buskin, Afognak (Litnik), and Pauls Bay. The expansion factor is based on 1986 data (Holmes 1990) whereby the total combined estimated escapement for the nine streams was 30.67% of the total estimated KMA escapement for that year (Appendix C.1).

The estimated 1989 coho run was determined from the sum of the actual catch and the estimated total escapement.

The 1989 coho catch had there not been the oil spill was estimated by multiplying the estimated 1989 run, in numbers of fish, by 44.19% which represents the average KMA coho run exploitation rate for the years 1985-88 (Appendix C.1).

Chinook Salmon

The 1989 KMA chinook escapement was counted through weirs principally at Dog Salmon Creek, Red River (Ayakulik), and Karluk River (Appendix A.1). The estimated run was the sum of the catch and escapement.

The 1989 chinook catch had there not been the oil spill was estimated by multiplying the estimated 1989 run in numbers of fish by 18.53% which represents the average KMA chinook run exploitation rate for years 1979-88 (Appendix C.2).

RESULTS

Sockeye Salmon

The 1989 sockeye run was an estimated 4,460,018 fish which includes a 3,170,482 fish escapement (Appendix A.1 and A.3) and a 1,289,536 fish catch (Table 4). Essentially all the catch occurred in the Alitak Bay District within Moser and

Table 4. The 1989 salmon escapement, catch, and run numbers by species of fish returning to the Kodiak Management Area spawning systems, and the estimated distribution of these fish without the fisheries restrictions caused by the M/V Exxon Valdez spill in Prince William Sound.

Species	Actual Distribution			Estimated Distribution Without the Oil Spill		
	Escapement	Catch	Run	Escapement	Catch ^{ab}	Run
Sockeye	3,170,482	1,289,536	4,460,018	1,931,000	2,529,018	4,460,018
Pink	21,084,539	183,236	21,267,775	4,670,506	16,597,269	21,267,775
Chum	1,530,148	19,972	1,550,120	784,440	765,680	1,550,120
Coho	317,448	2,599	320,047	178,614	141,433	320,047
Chinook	26,077	106	26,183	21,333	4,850	26,183

^a The sockeye catch number does not include an additional 4,880 Chignik River sockeye salmon which would have been caught in the Cape Ivak fishery pre-July 26 or any other interception fish which may have been harvested in the course of conducting normal Kodiak Management Area fisheries.

^b The pink salmon catch number does not include the Kitoi Bay catch of approximately 6,437,666 hatchery fish.

Olga Bays (Malloy 1989), and escapement goals were exceeded for all major systems (Table 1; Appendix A.1).

The estimated run of 4,460,018 fish would have produced about a 2,529,018 fish catch had there not been the oil spill (Table 4; Appendix C.3) and the escapement goal mid point of 1,931,000 fish been reached. The estimated catch automatically includes 20% of the total number of sockeye salmon that would have been caught in the Cape Igvak Section pre-July interception fishery had this area been open to fishing. State Board of Fisheries adopted management plan considers 20% of the pre-July 26 Cape Igvak Section sockeye catch to be local KMA fish. Since there was not a Cape Igvak interception fishery the 20% local stock component was naturally be accounted for as catch and escapement in the KMA. Had there been the Cape Igvak interception fishery an estimated 6,100 sockeye salmon would have been harvested with 1,220 of them considered local fish (L.M. Malloy, Alaska Department of Fish and Game, Kodiak, personal communication).

Pink Salmon

The 1989 total KMA pink escapement was an estimated 21,084,539 fish into 454 streams, while the commercial catch was 183,236 fish (Table 4). The total run was approximately 21,267,775 fish.

With a 21,267,775 fish run and a 4,670,506 fish escapement goal, the 1989 commercial catch would have been approximately 16,597,269 fish had there not

been the oil spill (Table 4;Appendix C.4). The estimated catch does not include the 6,437,666 pink harvest of the Kitoi Bay hatchery run.

Chum Salmon

The 1989 KMA chum catch was 19,972 fish (Table 4), while the escapement was an estimated 1,530,148 fish (Appendix A.1 and A.7). The estimated total run was 1,550,120 fish.

Assuming that the minimum KMA escapement goal of 784,440 fish was reached, the 1989 commercial catch would have been about 765,680 fish from the estimated 1,550,120 fish run had there not been the oil spill (Table 4;Appendix C.5).

Coho Salmon

The 1989 KMA coho catch was 2,599 fish (Table 4), while the estimated total escapement was 317,448 fish (Appendix A.1 and C.1). The run was an estimated 320,047 fish.

For the years 1984-88, the KMA has averaged an estimated 44.19% coho run harvest rate (Appendix C.1). Applying this average, the expected 1989 KMA coho catch would have been approximately 141,433 fish had there not been the oil spill (Table 4).

Chinook Salmon

In 1989 for the KMA, the chinook catch was 106 fish, the escapement was 26,077 fish, and the total run was 26,183 fish (Table 4).

From 1979 through 1988 an average 18.53% of the KMA chinook run has been catch (Appendix C.2). Based on this average the potential 1989 KMA chinook catch would have been approximately 4,850 fish had there not been the oil spill (Table 4).

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Appendix A.1. Total salmon escapements counted through weirs, by stream and species within the Kodiak Management Area, 1989.

District Stream	Number of Fish				
	Sockeye	Pink	Chum	Coho ^a	Chinook
Afognak District					
Afognak R. (252-342)	88,825	49,088 ^b	9	16,347	0
East Arm Ck. (251-404)	48	20,056	522	433	0
Big Bay Ck. (251-601)	0	62	0	1,799	0
Carry Bear Ck. (251-705)	7	37	0	441	0
Whitey's Hole Ck. (251-706)	1	11	0	42	0
Ltl. Waterfl Ck. (251-822)	0	106,347	0	0	0
Perenosa Ck. (251-830)	9	95,700	4	5,928	0
Pauls Bay Ck. (251-831)	12,605	4,254	0	7,984	0
Thorsheim Ck. (251-302)	8,206	15	32	0	0
subtotal	109,701	275,570	567	32,974	0

Alitak Bay District					
Akalura Ck. (257-302)	116,029	49,608	3	4,182	0
Dog Salmon Ck. (257-403)	362,007	315,559	4,690	6,750	156
Upper Station Ck. (257-304)	286,288	754	1	7,229	4
subtotal	764,324	365,921	4,694	18,161	160

-Continued-

Appendix A.1. (page 2 of 2)

District Stream	Number of Fish				
	Sockeye	Pink	Chum	Coho ^a	Chinook
Northwest District					
Karluk R. (255-101)	1,108,646	109,880	129	25,370	10,484
subtotal	1,108,646	109,880	129	25,370	10,484

Southwest District					
Ayakulik R. (256-201)	768,101	45,655	100	12,822	15,432
subtotal	768,101	45,655	100	12,822	15,432

Eastside District					
Saltery Ck. (259-415)	30,237	214,541	14	6,738	1
subtotal	30,237	214,541	14	6,738	1

Northeast District					
Buskin R. (259-211)	17,853	272,785 ^c	79	9,954	0
subtotal	17,853	272,785	79	9,954	0

Total	2,798,862	1,284,352	5,583	106,019	26,077

^a Coho escapement counts for listed streams include a post-weir estimate derived from the time-of-entry pattern of the escapement counted. Karluk, Ayakulik, Dog Salmon, Upper Station, Akalura, Saltery, Buskin, Afognak and Pauls Bay.

^b Estimate includes 7,477 pink salmon escapement through an Afognak River tributary down river of the Afognak River weir.

^c Pink salmon weir count was expanded by a factor of 1.7143 based upon historical spawner distribution below the existing weir facility.

Appendix A.2. Salmon escapement survey counts by stream, Kodiak Management Area, 1989.

Stream	Date MM-DD	Observer	Visibility			-----Fish in Stream-----				Build Up Fish		Observer Remarks	
			Str	Mou	Bay	Reds	Coho	Pink	Chum	Mouth	Bay		
Selief													
251-101	6-27	Brennan	e	e	e	50	0	0	0	-	-	1500 Hrs. Fish in ball just below outlet to lake. Two beaver dams in stream to second lake - doubtful if fish can pass.	
251-101	7-16	Brennan	g	g	g	2600	0	0	0	-	1500P	1345 Hrs. 2,600 reds up in lake along north side creek to second lake blocked by beaver dam.	
251-101	7-26	Brennan	e	e	e	2000	0	0	0	-	-	2000 hrs. Tide flooding.	
251-101	7-31	Brennan		g	g	0	0	0	0	1500P	-	1629 hrs. Tide falling. Just a few small dabs. Jumpers outside. No stream survey.	
251-101	9-13	Brennan	f	f	f	0	4500	0	0	-	-	1440 hrs. Wind, turbidity.	
Waskanareska Creek													
251-102	9- 7	Sampson	e	e		0	0	409	0	3P	-	Foot Survey. Surveyed only about half of creek. Plus 185 pink carcasses in stream. Good water flow. Pinks spread out evenly.	
Muskomee Bay													
251-103	9- 7	Sampson	g	g		1	18	4000	24	3Co	20P	-	Foot survey. Plus 800 pink carcasses in stream. Good water flow. Pinks spawning in lower half of creek. Chums and coho in pond. Beaver dams block access to upper creek and lakes.
Dolphin Creek													
251-104	9- 7	Sampson	f	f		0	0	300	0	-	-	Foot survey. Only surveyed first 75 yards of creek. Plus 50 pink carcasses in stream.	
Malina River													
251-105	7-16	Brennan	g	g	g	0	0	0	0	-	110R	1355 Hrs. No fish seen in either lake or river. Some reds off mouth.	
251-105	7-26	Brennan	e	e	e	120	0	1200	0	-	1700P	1945 hrs. Tide flooding. 120 reds in lakes, 30+ in first lake in deep water, 0 in creek. Pinks in lagoon. Bay fish to south along rock.	
251-105	9- 6	Hastings	g			0	0	27	0	-	-	Surveyed after peak spawning; very few live fish seen. Estimating 220 carcasses.	
251-105	9-10	Hastings	f			12	0	35	0	-	-	Surveyed upper stream, mid reach to lake. Past peak spawning. Plus 50 carcasses.	
251-105	9-13	Brennan	f	f	f	1600	0	350	0	850R 400P	-	1425 hrs. Reds were distributed - 300 between lakes, 550 along shore of lower lake, 750 at outlet to stream.	

-Continued-

Appendix A.2. (page 2 of 69)

Stream	Date MM-DD	Observer	Visibility Str Mou Bay	-----Fish in Stream-----				Build Up Fish		Observer Remarks
				Reds	Coho	Pink	Chum	Mouth	Bay	
Herring Camp Creek 251-109	9- 7	Sampson	g g	0	0	500	0	20P	-	Foot survey. Plus 50 pink carcasses in stream. Lots of water coming down into a series of falls and pools.
Malka Bay 251-201	9- 8	Sampson	f f	0	0	774	0	-	-	Foot survey. Plus 713 pink carcasses in stream. Good water flow. Creek forks 500 yards upstream. Southwest fork is the main stem but fish present in both.
Malina Bay 251-202	9- 8	Sampson	g g	3	0	651	0	-	-	Foot survey. Plus 582 pink carcasses in stream. Surveyed 0.25 miles of stream; pinks spread out evenly.
Marker Creek 251-206	9- 8	Sampson	g g	0	0	9	0	-	-	Foot survey. Plus 16 pink carcasses in stream.
Site Creek 251-207	9- 8	Sampson	f f	0	0	200	0	-	-	Foot survey. Plus 25 pink salmon carcasses. Pinks spawning in intertidal lagoon.
Long Lagoon 251-301	9-13	Brennan	p f f	0	0	0	0	-	-	1415 hrs. No fish seen in bay or lagoon. Creek and upper 1/2 of lagoon muddy.
Thorsheim Creek 251-302	6-28	Brennan	f g	0	0	0	0	2500R	-	1230 Hrs. Fish too bright to get good estimate; likely more fish present.
251-302	7-17	Weir Count	f	8206	0	15	32	-	-	Weir in place 6/4 through 7/17. No estimate made of fish remaining in the lagoon or bay.
251-302	7-26	Brennan	g g	0	0	0	0	100R 2500P	-	1935 hrs. Tide flooding. No stream survey.
251-302	9-12	Rudio	e f	10	0	368	0	1R 500Co 50P	-	Foot survey. Plus an estimated 5,000 pink carcasses. Several coho jumping in the lagoon. 50% of pinks in stream still bright.
South Arm Creek 251-403	7-16	Brennan	f f f	0	0	0	0	-	-	1415 Hrs.

-Continued-

Appendix A.2. (page 3 of 69)

Stream	Date MM-DD	Observer	Visibility			-----Fish in Stream-----				Build Up Fish		Observer Remarks	
			Str	Mou	Bay	Reds	Coho	Pink	Chum	Mouth	Bay		
251-403	9-11	Rudio	e	f		0	0	200	0	50Co	20P	-	Foot Survey. Plus an estimated 600 pink carcasses. Majority of live pinks spawned out. 80% of carcasses are bear kills.
East Arm Creek													
251-404	7-16	Brennan	g	g	g	0	0	0	0	500P		2000P	1425 Hrs. Only one ball pinks on north side of bay. A few (50) edging into mouth at high tide.
251-404	7-18	Brennan	g	g	g	0	0	300	5	500P		3000P	1505 Hrs. Not a lot of "show".
251-404	7-26	Brennan	g	e	e	0	0	175	15	2200P		2600P	1920 hrs. Tide flooding.
251-404	7-31	Brennan		f	f	0	0	0	0	3500P		2200P	1600 hrs. Tide falling. No stream survey.
251-404	9-13	Brennan	f	f	f	0	0	350	0	-		-	1400 hrs. Plus 5,000 carcasses in bay. Few carcasses apparent in creek - washed out??
251-404	9-18	Weir Count	f			48	433	20056	522	-		-	Weir in operation 7/20 through 9/18. Counts do not include estimates of fish in lagoon or bay after weir pulled.
Old Cabin Creek													
251-405	9- 6	Hander	g	g		0	0	75	0	5P		-	Foot survey. 1330 hrs. Mid high tide. Plus 25-30 carcasses in stream and a few pink carcasses off the mouth.
Hidden Lake Creek													
251-406	9- 6	Hander	g	g		0	0	1500	0	1R	1Co	-	Foot Survey. 1450 hrs. Stream flow good. Surveyed approx. 0.5 miles upstream from mouth. Plus an estimated 5000 pink carcasses in stream and 500 pink carcasses off mouth.
251-406	9- 9	Sampson	f	f		0	0	2500	0	-		-	Foot Survey. Plus 25,000 pink carcasses in stream. Water level very high.
Long Canyon Creek													
251-407	9- 6	Hander	g	g		0	0	3000	0	50P		-	Foot survey. 1045 hrs. Mid low tide. Moderate water level. Surveyed to falls. Plus an estimated 1500 pink carcasses in the stream and hundreds of carcasses off mouth.
251-407	9- 9	Sampson	g	g		0	0	425	0	-		-	Foot survey. Plus 8,000 pink carcasses in stream. Surveyed only 0.5 miles upstream.
Bluefox Creek													
251-502	6-28	Brennan		f	f	0	0	0	0	-		-	1200 Hrs. No stream survey

-Continued-

Appendix A.2. (page 4 of 69)

Stream	Date MM-DD	Observer	Visibility		-----Fish in Stream-----				Build Up Fish		Observer Remarks
			Str	Mou Bay	Reds	Coho	Pink	Chum	Mouth	Bay	
251-502	9- 8	Hander	g	g	0	0	75	0	5P	-	Foot survey. 1510 hrs. Mid low tide. Moderate water level. Surveyed to falls. Plus an estimated 100 pink carcasses in stream and 25 pink carcasses off mouth.
251-502	9- 9	Sampson	f	f	0	0	75	0	-	-	Foot survey. Plus 150 pink carcasses in mouth. High water.
Ester Lagoon Creek											
251-503	9- 9	Sampson	f	f	0	0	0	0	-	-	Foot survey. Looks like good spawning habitat.
SW Redfox Creek											
251-504	6-28	Brennan		f f	0	0	0	0	-	-	1150 Hrs. No stream survey.
251-504	9- 1	Barnhart	f	f	0	0	250	0	1000Co	-	Surveyed only 75 yards of stream.
251-504	9-10	Sampson	g	g	0	0	15	0	3000Co	-	Foot survey. Plus 600 pink carcasses in lagoon.
SE Redfox Creek											
251-505	9-10	Sampson	f	f	0	0	75	0	2Co 40P	-	Foot survey. Plus 250 pink carcasses in stream. Good water flow.
251-505A	9-10	Sampson	f	f	0	0	24	0	-	-	Foot survey. Plus 400 pink carcasses. Only partial survey, past peak spawning.
Crossfox Creek											
251-506	9-10	Sampson	f	f	0	0	24	0	75P	-	Foot survey. Plus 250 pink carcasses in stream. Only partial survey. Good water flow.
Cataract Creek											
251-507	9-10	Sampson	f	f	0	0	12	0	-	-	Foot survey. Plus 275 pink carcasses in lagoon. Pinks spawning in intertidal area.
Hander Creek											
251-510	9- 8	Hander	g	g	0	0	2000	0	10Co 100P	-	Foot survey. 1530 hrs. Mid low tide. Good water level. Plus an estimated 2000 pink carcasses in stream and 150 pink carcasses off mouth. Previously undocumented anadromous fish stream.
251-510	9- 9	Sampson	f	f	0	0	12	0	-	-	Foot survey. Plus 1500 pink carcasses in mouth.
Big Bay Creek											
251-601	9-25	Caylor	f	f f	0	1799	62	0	850Co 200P	1500Co 500P	Weir in operation 8/10 through 9/25. Bay counts are rough estimates.

-Continued-

Appendix A.2. (page 5 of 69)

Stream	Date MM-DD	Observer	Visibility			-----Fish in Stream-----				Build Up Fish		Observer Remarks
			Str	Mou	Bay	Reds	Coho	Pink	Chum	Mouth	Bay	
Carry Bear Creek 251-705	9- 9	Caylor	f	f		7	441	37	0	1000Co	-	Weir in operation 8/16 through 9/9. Mouth count is a rough estimate of fish remaining after weir pulled.
Whitey's Hole 251-706	9- 9	Caylor	f			1	42	11	0	-	-	Weir in operation 8/17 through 9/9. No estimate of fish remaining in lagoon or bay after weir pulled.
251-706	9-11	Sampson	f	f		0	50	0	0	3000Co	-	Foot survey. Plus 1 coho carcass. Fish still in salt water. Very bright.
Back Bay Creek 251-811	9-11	Sampson	e	e		0	0	11	0	24Co	-	Foot survey. Plus 30 pink and 2 coho carcasses.
Anderson Bay Creek 251-812	9-11	Sampson	f	f		0	0	0	0	-	-	Foot survey. Plus 2 pink carcasses in mouth.
Big Fort Creek 251-813	9-11	Sampson	f	f		0	0	150	0	-	-	Foot survey. Plus 2,000 pink carcasses in mouth. Surveyed only 0.25 miles of creek. Very high water.
Big Waterfall 251-821	7-31	Brennan	f	f	f	0	0	0	0	1000P	-	1546 hrs. Tide high.
251-821	9-11	Hastings	g	g		0	0	0	0	2500P	-	No live or dead pinks found beyond waterfall. All pinks spawning in intertidal.
Little Waterfall 251-822	8-21	Honnold	f			8	0	11722	0	-	-	Foot survey. Plus 1639 pink carcasses on weir.
251-822	8-28	Honnold	f	f		14	0	51752	0	50000P	-	Weir count and foot survey. Plus 9479 pink carcasses on the weir.
251-822	9- 4	Honnold	f	f		0	16	42873	0	43000P	-	Weir count and foot survey. Plus 10530 pink carcasses on weir.
Portage Creek 251-825	7-26	Brennan	g	e	g	425	0	0	0	4200P	-	1850 hrs. Tide flooding. Not much else showing; lots of dollies in stream plus 425+ reds in upper lake; more in deep water.
251-825	7-31	Brennan	f	g	f	0	0	300	0	-	2000P	1537 hrs. Tide high.

-Continued-

Stream	Date MM-DD	Observer	Visibility			-----Fish in Stream-----				Build Up Fish		Observer Remarks
			Str	Mou	Bay	Reds	Coho	Pink	Chum	Mouth	Bay	
251-825	8-25	Hastings	f	f	f	0	0	10000	0	10000P	50000P	Dense amounts of pinks moving in from bay area to lagoon. Lots of spawning activity; redds dug in streambed. Water very murky and high. Estimate 2000 carcasses.
251-825	8-27	Weir Count	f			9	5928	79690	4	-	-	Weir operating 8/13 through 8/27. Counts include estimates of fish in the creek prior to weir and in bay after weir pulled.
251-825	9-13	Brennan	g	g	f	0	7000	88700	0	-	-	1345 hrs. Fish well distributed: 50% in lower end; 15% mid reaches; 35% in upper end.
Discovery Bay Creek												
251-826	7-26	Brennan	e	e	g	0	0	0	0	-	-	1850 hrs. Tide flooding.
Elk Creek												
251-829	7-26	Brennan	g	e	g	0	0	0	0	-	-	1850 hrs. Tide flooding.
Cabin Creek												
251-830	7-26	Brennan	g	e	g	0	0	0	0	-	-	1855 hrs. Tide flooding.
Paul's Bay												
251-831	6-28	Brennan		g	g	0	0	0	0	1500R	1000R	1130 Hrs. Fish very bright and difficult to see. Most off west end of log boom or in bight to west. No stream survey.
251-831	9-10	Weir Count	f			12605	7919	4254	0	-	-	Weir in operation 6/6 through 9/10. Count includes estimate of fish remaining in the bay after the weir closed.
Barnyard Creek												
251-832	9- 2	Barnhart	f	f		0	0	75	0	300P	-	Pinks spawning in lower reaches of stream. No fish in upper reaches or in muskeg type lake at head of stream.
Seal Creek												
251-901	9-11	Sampson	f	f		0	12	1500	0	-	-	Foot survey. Plus 4,500 pink carcasses in stream. Surveyed to fish pass. Most pinks spawning below fish pass.
Tonki Camp Creek												
252-103	9- 2	Barnhart	f	f		0	0	1150	0	-	-	Barrier falls upstream delinates available fish habitat.

-Continued-

Appendix A.2. (page 7 of 69)

Stream	Date MM-DD	Observer	Visibility			-----Fish in Stream-----				Build Up Fish		Observer Remarks
			Str	Mou	Bay	Reds	Coho	Pink	Chum	Mouth	Bay	
Tonki Falls Creek	252-104	9- 2 Barnhart	f	f		0	0	325	0	-	-	Barrier falls upstream limits available habitat.
East Saposa Creek	252-301	7-26 Brennan	e	e	e	0	0	0	0	-	-	1830 hrs. Tide flooding.
	252-301	9- 3 Sampson	g	g		0	0	1000	0	6000P	-	Foot survey. Plus 500 pink carcasses in creek. Only 50 yards of available habitat before impassible waterfall.
Grassy Lagoon Creek	252-302	9- 3 Sampson	g	g		0	0	2500	0	4Co 500P	-	Foot survey. Plus 800 pink carcasses in creek. Surveyed only first 75 yards...fish spawning everywhere. Creek plugged with fish.
	252-302	9-12 Joyce			f	0	0	0	0	-	50000P	Rough estimate of surplus Kitoi fish that moved toward this system (based on aerial survey 9/10 - 9/12). No estimate of number that moved into the creek.
Unnamed	252-303	7-26 Brennan	e	e	e	0	0	0	0	-	-	1830 hrs. Tide flooding.
	252-305	9- 3 Sampson	g	g		0	0	1500	0	34000P	-	Foot survey. Plus 1500 pink carcasses in stream. Only 25 yards of available spawning habitat, and entrance to creek limited to high tide. Pinks actively spawning in lagoon along shore and in sloughs. "New" creek on north side of lagoon also with excellent escapement.
Saposa Bay	252-306	7-26 Brennan	e	e	g	0	0	0	0	-	-	1835 hrs. Tide flooding.
	252-306	9- 3 Sampson	g	g		0	0	50000	0	16000P	-	Foot survey. Plus 5000 pink carcasses in mouth. "Fish so thick you could walk on their backs". Surveyed only 0.5 miles upstream.
	252-306	9-12 Joyce			f	0	0	0	0	-	150000P	Rough estimate of surplus Kitoi fish which moved toward this system (based on aerial surveys 9/10 - 9/12). No estimate of number that moved into creek.
Ruth Bay												

-Continued-

Stream	Date MM-DD	Observer	Visibility			-----Fish in Stream-----				Build Up Fish		Observer Remarks
			Str	Mou	Bay	Reds	Coho	Pink	Chum	Mouth	Bay	
252-307	9- 3	Sampson	g	g		0	0	3500	0	15000P	-	Foot Survey. Plus 1500 pink carcasses in stream. Surveyed only first 100 yards...creek was saturated with fish. Heavy bear activity. Total number of fish in 10's of thousands.
252-307	9-12	Joyce			f	0	0	0	0	-	60000P	Rough estimate of surplus Kitoi fish which moved toward this system (based on aerial survey 9/10 - 9/12). No estimate of number that moved into the creek.
Barrier Creek												
252-308	9- 3	Sampson	e	e		0	0	3	0	3Co 25P	-	Foot survey. Plus 22 pink carcasses in stream. Only 23 yards of spawning habitat available; log dam in creek. More fish off mouth.
Left Hand Bay												
252-309	9- 3	Sampson	g	g		0	0	20000	0	3000P	-	Foot survey. Plus 1500 pink carcasses in stream. Surveyed only 0.25 miles. Good water flow. Pinks spawning everywhere possible.
252-309	9-12	Joyce			f	0	0	0	0	-	60000P	Rough estimate of surplus Kitoi fish which moved toward this system (based on aerial surveys 9/10 - 9/12). No estimate of number that moved into the creek.
Hermit's Creek												
252-317	6-28	Brennan	g	g	g	0	0	0	0	-	-	1110 Hrs.
252-317	9- 5	Sampson	g	g		0	6	1	0	12Co	-	Foot survey. Low tide. Fair water flow. Only a few fish showing in lagoon, nothing in creek. According to Ralf, the hermit, very poor show this year.
McDonald's Lagoon												
252-318	9- 3	Sampson	f	f		0	0	30000	0	2Co 15000P	-	Foot survey. Plus 1500 pink carcasses in stream. Surveyed only 0.75 miles of creek. Fish spawning in any available space... intertidal areas, sloughs, side creeks, etc.
252-318	9-12	Joyce			f	0	0	0	0	-	150000P	Rough estimate of surplus Kitoi fish which moved toward this system (based on aerial surveys 9/10 - 9/12). No estimate of number that moved into the creek.
Little Afognak												

-Continued-

Stream	Date MM-DD	Observer	Visibility			-----Fish in Stream-----				Build Up Fish		Observer Remarks
			Str	Mou	Bay	Reds	Coho	Pink	Chum	Mouth	Bay	
252-319	6-28	Brennan	g	g	g	0	0	0	0	-	-	1100 Hrs.
Kitoi Bay												
252-32	7-26	Brennan	e	e		0	0	0	0	20000P	133000P	1805 hrs. Tide flooding. By dock 20,000; along north side inner bay 25,000; along southside to booms 65,000; outside to north 23,000; inside log boom 10,000+; outside log boom 12,000+; by mouth of Little Kitoi 27,000.
252-32	7-30	Malloy			g	0	0	0	0	-	610000P	Heavy schooling near net - scattered schools throughout Inner Kitoi Bay.
252-32	7-31	Brennan			g	0	0	0	0	-	970000P	1525 hrs. Tide high. Very impressive.
252-32	8- 4	Brennan			g	0	0	0	0	1780000P	1500000P	Nicholson's overall estimate 800,000 - 1,000,000. 1535 hrs. Tide high. Fish in large schools from Cape Izhut to Peril Cape and inside to booms (over 1 million pinks). Large school also along shoreline around point into Izhut Bay (500,000 plus). Some of bay fish appear to be moving to south, most moving inside. Jumpers further out (between Kitoi and Spruce Island).
252-32	8-19	Brennan			f	0	0	0	0	-	1510000P	1400 hrs. More fish outside by booms coming into the bay.
252-32	9-13	Brennan			p	0	0	0	0	150000P	790000P	1330 hrs. Bay overflight. Water very dark and murky, cloudy, so poor look. Fish widely spread but unable to tell depth. Could be less or more (top estimate 1.2 million). No stream survey.
252-32	9-15	Prokopowich	g	g	g	0	0	0	0	-	300000P	Bay survey only. Majority of fish in front of hatchery. Bay murky - most schools appeared to be very shallow - fish very dark.
Little Kitoi												
252-323	7-26	Brennan			e	0	0	0	0	27000P	-	1820 hrs. Tide flooding.
252-323	7-31	Brennan			g	0	0	0	0	-	110000P	1525 hrs. Tide high.
252-323	9-19	Joyce	f			0	0	150000	0	-	-	This is an estimate of total escapement from surplus pinks in Kitoi Bay. See comments under Big Kitoi.

-Continued-

Stream	Date MM-DD	Observer	Visibility			-----Fish in Stream-----				Build Up Fish		Observer Remarks
			Str	Mou	Bay	Reds	Coho	Pink	Chum	Mouth	Bay	
Big Kitoi												
252-324	9-19	Joyce	f			0	0	250000	0	-	-	This is a rough estimate of escapement into this creek from surplus pinks in Kitoi Bay. The remainder of the surplus is distributed as follows... Little Kitoi(323): 150,000; McDonald's Lagoon(318): 150,000; Saposa Bay(306): 150,000; Ruth Bay(307): 60,000; Left Hand Bay(309): 60,000; Grassy Bay(302): 50,000. Approximatley 100,000 pinks died in the bay prior to spawning.
N.E. Danger Creek												
252-331	7-31	Brennan	g	g	g	0	0	0	0	600P	-	1515 hrs. Tide high.
252-331	9- 6	Sampson	g	g		0	54	2131	0	1R 18Co 150P	-	Foot survey. Plus 225 pink carcasses in stream. Pinks well distributed throughout stream...there doesn't appaar to be any overcrowding in the spawning areas.
252-331A	9- 6	Sampson	g	g		0	0	1429	0	-	-	Foot survey. Good water flow. Majority of spawning habitat from bridge to saltwater.
252-331B	9- 6	Sampson	g	g		0	50	1156	0	6Co 12P	-	Foot survey. Plus 263 pink carcasses in stream.
Big Danger												
252-332	7-26	Brennan	g	e	e	0	0	35	0	4700P	-	1745 hrs. Tide flooding. Fish lying in kelp below river mouth, just starting to enter river.
252-332	7-31	Brennan	g	g	f	0	0	500	0	1500P	3000P	1510 hrs. Tide high.
252-332	8-19	Brennan	f	f	f	0	0	500	0	1900P	-	1355 hrs. Plus an estimated 300 carcasses.
252-332	9- 5	Sampson	g	g		0	0	30000	500	-	-	Foot Survey. Plus 30,000 pink and 25 chum carcasses in stream. Good water flow. Plenty of spawning habitat in upper reaches of both forks.
252-332	9- 6	Kaplan	g	g		0	0	11000	30	1000P	-	The majority of live pinks and 2000+ carcasses found from tide water to 1 mile upstream. Estimating 500 live pinks in east fork.
252-332	9-13	Brennan	g	g	f	0	0	450	0	-	-	1320 hrs. Plus 2,850 carcasses.
East Danger Creek												
252-333	7-26	Brennan	f	e	e	0	0	0	0	200P	-	1735 hrs. Tide flooding.
252-333	9- 5	Sampson	e	e		2	0	15000	0	500P	-	Foot survey. Plus 10,000 pink carcasses in stream. Stream doesn't appear over saturated.

-Continued-

Appendix A.2. (page 11 of 69)

Stream	Date MM-DD	Observer	Visibility			-----Fish in Stream-----				Build Up Fish		Observer Remarks
			Str	Mou	Bay	Reds	Coho	Pink	Chum	Mouth	Bay	
N.W. Danger Creek												
252-335	7-26	Brennan	g	e	e	0	0	0	0	-	-	1740 hrs Tide flooding. Foot survey. Plus 30 pink carcasses in stream. Good water flow. Little sign of overcrowding. Pinks spawning in intertidal area and in pool below falls.
252-335	9- 5	Sampson	g	g		0	0	189	0	20P	-	
P-A Creek												
252-337	9- 5	Sampson	g	g		0	0	3	0	40P	-	Foot survey. Plus 3 pink carcasses in stream.
Steep Creek												
252-338	9- 5	Sampson	g	g		0	0	2	0	-	-	Foot survey.
Crack Creek												
252-339	9- 5	Sampson	f	f		0	0	7	0	3P	-	Foot survey. Plus 1 pink carcass in stream. Fairly good water flow.
Afognak River												
252-342	9-20	Weir Count	f			88825	13050	41611	9	-	-	Weir in operation 5/13 through 9/20. Plus three kings. No estimate given of fish remaining in the bay after the weir pulled.
Marka Bay												
252-343	7-26	Brennan	g	e	e	0	0	350	0	900P	6700P	1725 hrs. Tide flooding. Fish sitting along outside of booms...2,200 outside and 45,000 along inner boom. Stream fish in lower 1/2 mile. Water level low.
252-343	7-31	Brennan	g	g	g	0	0	400	0	400P	2700P	1456 hrs. Tide high.
252-343	8-19	Brennan	p	p	f	0	0	2300	0	-	-	1345 hrs.
252-343	9- 6	Hastings	g			0	0	10000	0	-	-	Estimating 10,000 live and 4,000 carcasses in entire system.
252-343	9-13	Brennan	g	g	f	0	25	200	0	200Co	-	1310 hrs. Plus 1,000 carcasses in creek and 15,000 carcasses in bay.
Cort's Creek												
252-345	9-13	Brennan	p	f	f	0	0	550	0	-	-	1300 hrs. Plus 3,800 carcasses.
252-345	9-19	Weir Count	f			42	28	6469	19	-	-	Weir in operation 7/19 through 9/19. No estimate given for fish remaining in the bay after weir closed
252-902	9-11	Hastings	g	g		0	0	40	0	-	-	No live pinks in intertidal area. Stream becomes swamp 350 yards upstream from tide water. Estimating 250+ carcasses.

-Continued-

Stream	Date MM-DD	Observer	Visibility			-----Fish in Stream-----				Build Up Fish		Observer Remarks
			Str	Mou	Bay	Reds	Coho	Pink	Chum	Mouth	Bay	
Campbell Lagoon												
253-114	8- 1	Hander	f	g	g	0	0	15	0	-	-	1314 hrs. Tide low, stream low. No fish in lagoon or off mouth.
253-114	8-29	Hander	f	g		0	0	2500	0	-	-	1233 hrs. Low tide. Moderate water level. Few hundred pinks in stream, no counts. Pink count is from lagoon. No fish off of lagoon mouth.
253-114	9-13	Prokopowich	g	g		0	150	200	0	-	-	Plus 1800 pink carcasses in stream. Coho in lower lagoon.
Little River												
253-115	7- 5	Brennan	f	f	f	5700	0	0	0	500R	-	1115 Hrs. "Stream" fish actually in lake by upper creek mouths.
253-115	7-26	Malloy	f	e	g	14700	0	51000	0	3000P	17000P	Reds primarily schooled off tributaries with some fish up inside. Heavy carcasses (800) in mouth of middle tributary. Live reds: 4,500 E. trib., 5,100 mid trib, 4,300 W. trib; 800 at shoals between trib. Pinks heavily schooled in lower lagoon and beginning to move upstream. Glare in stream. Fish in main stem.
253-115	7-27	Chatto	p	g		4000	0	56000	0	14000P	-	1637 hrs. Some reds below lake outlet mixed with pinks but too scattered to count. Water level low.
253-115	8-26	Prokopowich	f	f		10000	0	84000	0	-	-	Estimate 25,000 pink carcasses. Reds - lake shore spawners and schooled off tributary.
253-115	8-29	Hander	f	f		5000	0	9000	0	11000P	-	1240 hrs. Mid tide. Low water level. Few carcasses. Few jumpers off of mouth.
253-115	9-13	Prokopowich	e			0	5000	0	0	-	-	No stream survey. Lagoon survey only.
253-115	9-18	Brennan	g	g	f	0	1205	150	0	-	-	1320 hrs. Water high but fairly good visibility. Surprisingly few fish or carcasses in river - washed out? Coho just sitting in deep water of lagoon.
S. Arm Uganik												
253-121	7- 5	Brennan		g	g	0	0	0	0	-	-	1100 Hrs. No stream survey.
253-121	7- 7	Brennan	p	p	p	0	0	0	0	-	10000Ch	1145 Hrs. Fish at edge of flats.
253-121	7-11	Brennan		g	g	0	0	0	0	17000Ch	-	1245 Hrs. Low estimate of fish in mouth, did not survey creek.
253-121	7-11	Chatto	f	f		0	0	0	200	40000Ch	-	1200 hrs. Low tide. Surveyed lagoon and 1 mile upstream. Most fish in stream were within 1/4 mile of lower section. Major buildup of fish inside lagoon mostly chums. Stream flow very low.

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Stream	Date MM-DD	Observer	Visibility			-----Fish in Stream-----				Build Up Fish		Observer Remarks
			Str	Mou	Bay	Reds	Coho	Pink	Chum	Mouth	Bay	
253-121	7-11	Malloy	p	p	p	0	0	0	0	1800Ch	-	Jumpers in lower portion of lagoon. Nothing showing in bay.
253-121	7-12	Nicholson	f			0	0	0	6000	-	-	South Arm - not much show for jumpers, 6,000 in creek. Could not survey Spiridon or Zachar.
253-121	7-18	Brennan	f	f	f	0	0	0	250	2000P 12000Ch	10000Ch	1835 Hrs. 2 miles of creek surveyed.
253-121	7-27	Chatto	p	f		0	0	0	10000	9000Ch	-	1740 hrs. Visibility from beaver ponds downstream poor (muddy) due to bear activity in pond. Visibility above beaver pond good. Stream estimate considered conservative. Water level low.
253-121	8- 1	Brennan		f	f	0	0	0	7000	5000Ch	5000P 10000Ch	1138 hrs. Tide low. Bay murky. Surveyed only 1 mile of stream. Poor look.
253-121	8-10	Hander	p	f		0	0	4000	0	2000P	-	1055 hrs. Mid outgoing tide. Lower creek from beaver dam down murky, Thousands of carcasses in stream.
253-121	8-25	Brennan	p	p	p	0	0	4000	0	2000P	-	1540 hrs. Awful conditions. Surveyed only 1/2 mile of stream.
253-121	8-29	Hander	f	f		0	0	8000	0	100P	-	1215 hrs. Low tide. Low water level. Conservative instream estimate due to brushy overhanging vegetation.
Uganik River												
253-122	7- 5	Brennan	g	g	f	13000	0	0	0	-	3500P	1050 Hrs. Reds off mouths of upper streams in lake.
253-122	7- 7	Brennan	p	p	p	0	0	0	0	-	5000Ch	1130 Hrs. Some jumping but too much wind and murk.
253-122	7-11	Malloy	f	f	f	0	0	5000	11000	2000P 4000Ch	3000P 5000Ch	South shore blank, northshore had fish but extremely "light"; most fish on flats.
253-122	7-11	Chatto	g	f		700	0	0	3900	-	-	1130 hrs. Surveyed upper river...observed all reds located in first mile of upper river. All chums in lower river. Saw very few fish in flats off mouth - no jumpers. Stream flow very low.
253-122	7-11	Brennan	f	f	p	3000	0	0	700	-	4000Ch	1300 Hrs. Quick look at river, poor look at bay. Reds in lake at mouths of upper river.
253-122	7-12	Nicholson	f			0	0	8000	0	-	-	Good showing along north shore. 8,000 in Uganik River.
253-122	7-18	Brennan	f	f	f	0	0	0	4200	6000Ch	1000Ch	1835 Hrs.

-Continued-

Appendix A.2. (page 14 of 69)

Stream	Date MM-DD	Observer	Visibility Str Mou Bay	-----Fish in Stream-----				Build Up Mouth	Fish Bay	Observer Remarks
				Reds	Coho	Pink	Chum			
253-122	7-26	Malloy	f f f	38000	0	28000	19000	12000P 5000Ch	18000P	Glare in upper river. Light turbidity/shadows in Bay. Pinks in closed waters. No new fish showing outside stream. Pinks distributed throughout stream. Chum favoring intertidal sloughs and above sampling area. Reds off tributaries and in small balls in upper portion lake.
253-122	7-27	Chatto	g p	33000	0	58500	0	7500P 42500Ch	-	1800 hrs. Surveyed upper Uganik River for 9.5 miles; water level low. 45% reds were off mouth along south shore of lake.
253-122	8- 1	Brennan	f f p	0	0	20000	53000	2000P 5000Ch	18000P 31000Ch	1148 hrs. Tide flooding.
253-122	8- 4	Prokopowich	e e e	0	0	125000	20000	-	4000P	-
253-122	8-10	Hander	f f	12500	0	13000	2000	21000P 14000Ch	-	1022 hrs. Mid high tide. All reds from lake mouth upstream. 9,000 reds off mouth in lake, rest in E. fork and main stem. Mixed chums and pinks in flats 35,000 total, 60% pink, 40% chum. Surveyed 6 miles up from lake.
253-122	8-25	Brennan	p p p	0	0	310000	16000	81000P 4000Ch	100000P	1525 hrs. Plus 30,000 carcasses. 95% of fish schooled up in pools and eddies at lower end of river.
253-122	8-29	Hander	f f	13300	0	112000	3000	80000P	-	1145 hrs. Low tide. Moderate water level. Heavy use of side pools for spawning. Most pinks asre below lake. Surveyed approximately 8 miles from mouth. Many jumpers in bay.
253-122	8-29	Prokopowich	g g g	20500	0	520000	20000	185000P	170000P	Reds at tributaries to lake.
253-122	9-14	Hastings	g	0	0	150000	0	-	-	Pinks spawning in tidal area and upstream 1 mile. No live fish seen beyond that. Estimating 200,000 carcasses in intertidal area.
253-122	9-18	Brennan	p f p	0	0	50000	5000	47000P 10000Ch	-	1300 hrs. Lake and stream high and murky, clearing slightly at mouth - poor look. A lot of fish in sloughs and mouth. Plus up to 175,000 carcasses at mouth.
253-122	11- 1	Barnes	f	0	2681	0	0	-	-	1456 hrs., surveyed lower and upper river. 57 fish in lower river, 894 in upper main stem, 1,730 fish in east fork. Surveyed upper 7 miles of river.
Cape Uganik Creek 253-141	9-13	Prokopowich	g g	0	0	1800	0	-	-	-

-Continued-

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Stream	Date MM-DD	Observer	Visibility			-----Fish in Stream-----				Build Up Fish		Observer Remarks
			Str	Mou	Bay	Reds	Coho	Pink	Chum	Mouth	Bay	
Unnamed 253-142	9-13	Prokopowich	g	g		0	0	900	0	-	-	Plus 3500 pink carcasses in stream.
Fawn Creek 253-311	9-13	Prokopowich	g	g		0	0	1500	0	100P	-	-
Coho Creek 253-313	9-13	Brennan	f	f	f	0	350	0	0	-	-	1450 hrs. Coho in lower end of lagoon. Plus 12,000 carcasses.
Viekoda Creek 253-321	8- 1	Hander	g	f		0	0	6000	0	-	-	1215 hrs, tide mid-low, few jumpers off mouth.
253-321	9-13	Brennan	f	f	f	0	50	0	0	-	-	1455 hrs. Plus 15,000 carcasses in lower river, mouth and bay.
Terror River 253-331	6-15	Brennan		g	g	0	0	0	0	-	-	1315 Hrs. No stream survey.
253-331	7- 5	Brennan	f	f	f	0	0	0	0	-	2500P	1040 Hrs.
253-331	7- 7	Brennan	p	p	p	0	0	0	0	150Ch	8000P	1100 Hrs. Water murky. Fish way out. Likely more present.
253-331	7-11	Chatto	g	f		0	0	0	4500	200Ch	5000Ch	1100 hrs. Low tide. Surveyed upstream and over flats. Most fish from mouth upstream to 2-1/2 miles. Stream flow low. Very few jumpers in flats. Visibility on flats not good.
253-331	7-11	Brennan	p	p	p	0	0	2000	2400	15000P	-	1330 Hrs. No fish in outer bay; most fish in deep channels on flats. Surveyed only 2 miles of river.
253-331	7-11	Malloy	f	f	f	0	0	4600	1500	-	12000P	Bay looks very sparse for this time. No sign in outer bay, only near flats.
253-331	7-12	Nicholson	f			0	0	10000	0	-	-	10,000 in creek. Within Terror Bay closed water - jumpers throughout bay area. Water rough.
253-331	7-18	Brennan	f	f	f	0	0	600	2000	28000P	27000P	1845 Hrs.
253-331	7-19	Blackett	f	f		0	0	25000	2250	-	-	Surveyed main channels for two miles upstream of lower tidal flats. Low tide. Scattered schools of pinks and chums 0.25 miles to 1.5 miles upstream from tidal flats in both channels. Concentrations of fish primarily above the USGS stream guage. Only a few schools of 10-20 fish seen in last 0.5 miles of survey. Consternation Creek had a few pinks (50-100) in the lower end. Many of the chums seen had severe fungus (estimating that they had been in system two to three weeks).

-Continued-

Stream	Date MM-DD	Observer	Visibility		-----Fish in Stream-----				Build Up Fish		Observer Remarks
			Str	Mou Bay	Reds	Coho	Pink	Chum	Mouth	Bay	
253-331	8- 1	Hander	f	f	0	0	33000	0	50000P	-	1245 hrs. Tide mid-low. Lots of glare on water in flats. Many jumpers in outer flats.
253-331	8- 4	Prokopowich	e	e	0	0	93000	10000	102000P	-	Started survey below 4-mile creek.
253-331	8-10	Hander	p	g	0	0	25000	0	40000P 10000Ch	-	1002 hrs. Mid high tide. Mixed chum and pink off mouth in flats. Estimate 50 K fish total 80% pink, 20% chum. Water level moderate flow. Lots of carcasses.
253-331	8-20	Swanton	g	g g	0	0	40000	0	10000P	10000P	Initial preflight survey. Fish (pinks) still moving into stream from bay, highest concentrations starting from the mouth of the river ranging 2 miles upstream. Most carcasses found washed downstream due to high water. Estimate 20,000 carcasses on first 1/2 mile of stream.
253-331	8-23	Blackett	g	f p	0	0	192000	9500	-	-	Intertidal, delta channels, to USGS stream guage (1.5 miles) 60,000 pink and 1,500 chum. To Consternation Creek (0.5 miles) 55,000 pink and 5,000 chum. Consternation Creek (0.2 miles) 2,000 pinks. To Four Mile Creek (2.25 miles) 70,000 pink and 3,000 chum. Four Mile to falls (1.0 mile) 5,000 pinks (pinks present beyond the guage in Four Mile Creek). Ouzel and Bear Creeks almost dry; only a few pinks in downstream portions. An unknown number of fish jumping in bay. Estimating 20,000 pink salmon carcasses. Massive schools of pink salmon in areas made estimation of numbers difficult, plus chums difficult to distinguish (there were probably more).
253-331	8-25	Brennan	f	f f	0	0	367000	23000	80000P 16000Ch	200000P	1510 hrs. Plus 43,000 carcasses. Of total 290 K in lower stream (below wire) 70 K above, and 20 K in sloughs.
253-331	8-29	Prokopowich	g	g g	0	0	162000	12500	30000P	118000P	Estimating 18,000 pink carcasses, 12,500 chum carcasses in stream. From mouth to cable - 85,000 pinks; sloughs - 19,000 pinks.
253-331	8-29	Hander	g	g	0	0	70000	0	3000P	-	1120 hrs. Low tide, water level good.

-Continued-

Appendix A.2. (page 17 of 69)

Stream	Date MM-DD	Observer	Visibility			-----Fish in Stream-----				Build Up Fish		Observer Remarks
			Str	Mou	Bay	Reds	Coho	Pink	Chum	Mouth	Bay	
253-331	9-11	Blackett	g	g	g	0	85	108600	2000	8000P	-	At river terminus 8,000 late run pinks. Intertidal, delta channels, to USGS stream guage (1.15 miles) 105,000 pink, 2,000 chum, 35 coho. To Consternation Creek (0.5 miles) 2,000 pinks. Consternation Creek (0.25 miles) 500 pinks. To Four Mile Creek (2.25 miles) 1000 pink and 45 coho. Ouzel and Bear Creeks (0.2 miles from junction) 100 pinks. Four Mile Creek to Falls (1.0 miles) 0 salmon. Early run pink salmon spawning in upstream areas almost gone. There is still an abundance of late run pinks in lower river and delta channels and new fish in bay. Some schools of massed pinks makes estimates of fish numbers difficult, plus it is difficult to distinguish chum salmon (there may have been more). Most all of carcasses have been washed downstream into the bay. Terror Bay was littered with carcasses.
253-331	9-18	Brennan	f	f	f	0	0	9000	11000	-	-	1245 hrs. Relatively few live fish left; Main stem pretty clean. Carcasses: Bay-150,000; mouth/sloughs-50,000; stream-75,000.
253-331	9-21	Blackett	g	g	f	0	500	32000	200	-	-	32,000 pink, 200 chum, and 400 coho from delta channels to USGS stream guage (1.15 miles). 100 coho beyond to Consternation Creek (+ 0.5 miles). Surveyed Consternation, Ouzel, Bear, and Four Mile Creeks (3.25 miles) - 0 salmon. Carcasses in intertidal area and bay estimated at 5 to 6 times the pink salmon live count. Upstream areas above Four Mile and Consternation Creeks surveyed by foot and helicopter on 09/20/1989. Spawning of pink and chum anticipated to be finished by October 5.
253-331	11- 1	Barnes	g			0	77	0	0	-	-	1448 hrs., surveyed entire river excluding tributaries.
Baumann's												
253-332	7-11	Brennan	g	g	g	0	0	0	0	-	3100P	1350 Hrs. No fish in lagoon or creek.
253-332	7-11	Malloy	p	p	p	0	0	0	0	-	-	Glare
253-332	7-12	Nicholson	f			0	0	5000	0	-	-	5,000 in creek. Within Terror Bay closed waters - jumpers throughout bay area - water rough.
253-332	7-18	Brennan	f	f	f	0	0	4000	0	12000P	-	1850 Hrs
253-332	8- 1	Brennan	f	g	f	0	0	45000	0	35000P	10000P	1223 hrs. Tide flooding. Turbulent so limited stream survey. Large number of fish in lower river and scattered over flats.
253-332	8- 1	Hander	g	g		0	0	20000	0	20000P	-	1227 hrs. Tide mid-low. Many schools pinks in bay.

-Continued-

Stream	Date MM-DD	Observer	Visibility			-----Fish in Stream-----				Build Up Fish		Observer Remarks
			Str	Mou	Bay	Reds	Coho	Pink	Chum	Mouth	Bay	
253-332	8-19	Brennan	f	f	f	0	0	45000	0	-	-	1330 hrs. Plus an estimated 18,000 carcasses.
253-332	8-20	Swanton	g	g	g	0	0	100000	0	50000P	100000P	Major build up of live pinks starting from the bay ranging 1/4 mile upstream to waterfalls. Highest concentrations in stream was last 120 meters to falls, estimate 60,000. Estimate 60,000+ carcasses washed up on high tide lines.
253-332	8-25	Brennan	f	g	g	0	0	110000	0	65000P	10000P	1455 hrs. Plus 45,000 carcasses. Difficult to count fish - extremely packed into intertidal. This estimate conservative.
253-332	8-29	Hander	g	f		0	0	50000	0	25000P	-	1105 hrs. Low tide, water level good. Surveyed from falls to mouth. Many carcasses instream and off mouth.
253-332	8-29	Prokopowich	e	e	e	0	0	325000	0	-	-	All fish inside banks on high tide.
253-332	9-18	Brennan	p	g	g	0	0	22000	0	-	-	1235 hrs. Lots of glare,. Poor look at stream. 50,000 carcasses at mouth, 120,000+ in bay.
Clara's Creek												
253-333	7-11	Malloy	p	p	p	0	0	0	0	-	-	Glare.
253-333	7-12	Nicholson	f			0	0	500	0	-	-	500+ in creek.
253-333	8- 1	Hander	f	g		0	0	100	0	50P	-	1223 hrs, tide mid-low, falls 300 yards upstream.
253-333	8-25	Brennan	g	g	g	0	0	800	0	2500P	-	1450 hrs. Plus 1,500 carcasses.
7-Mile Beach												
254-103	9-13	Prokopowich	g	g		0	0	2000	0	200Co 1500P	-	Wiley Creek -600 pinks.
Unnamed Creek												
254-105	9-13	Prokopowich	g	g		0	0	150	0	-	-	Plus 1250 carcasses.
254-20	6-27	Prokopowich			e	0	0	0	0	-	13000P 3000Ch	Additional 7,000 pinks along west shore - markers to Park's cannery. Small schools 10-15 fish heading into bay.
Uyak 201 Creek												
254-201	6-15	Brennan		g	g	0	0	0	0	-	-	1255 Hrs. No stream survey.
254-201	7- 5	Brennan		f	f	0	0	0	0	-	500P	1130 Hrs. Didn't survey creek.
254-201	7- 7	Brennan	f	f	f	0	0	0	0	-	-	1245 Hrs. No fish sighted.
254-201	7-11	Brennan		g	g	0	0	0	0	-	33000P	1130 Hrs Did not survey creek.
254-201	7-11	Malloy		g	g	0	0	0	0	18000P	-	Didn't survey creek
254-201	7-18	Brennan	f	f	f	0	0	0	0	10000P	15000P	1730 Hrs.
254-201	7-22	Giegerich	g	g		0	0	60000	0	500P	-	Area 300 yards around creek mouth observed 25 jumpers per second (like popcorn).
254-201	8- 1	Hander	p	f		0	0	2000	1000	5000P 5000Ch	-	1516 hrs. Tide high. 1,000+ carcasses in stream. Pinks, and chums in stream and flats mixed.

-Continued-

Stream	Date MM-DD	Observer	Visibility			-----Fish in Stream-----				Build Up		Observer Remarks
			Str	Mou	Bay	Reds	Coho	Pink	Chum	Mouth	Fish Bay	
Uyak River												
254-202	7- 5	Brennan	f	f	f	0	0	0	0	-	30000P 10000Ch	1200 Hrs. Westside of Uyak Bay 12,000 pinks, Eastside of Uyak Bay 18,000 pinks. Chums in middle of bay. Nothing in creek.
254-202	7- 7	Brennan	f	f	f	0	0	0	0	-	39000P 10000Ch	1300 Hrs. Eastside Uyak/Nellie's Cove - 24,000 pinks. Mid Uyak Bay 15,000 pinks. No fish in creek.
254-202	7-10	Chatto	g	g		0	0	100	150	-	-	1230 hrs. Low tide. Surveyed upstream 2 miles. Very few fish. No fish or jumpers seen in bay flats. Stream flow low.
254-202	7-11	Malloy	g	g	g	0	0	100	100	-	264000P 12000Ch	Westside of Uyak Bay 140,000 pinks; eastside of Uyak Bay 124,000 pinks. 12,000 chum in bay; all on westside.
254-202	7-11	Brennan	g	g	g	0	0	75	200	500P 100Ch	173000P 10000Ch	1140rs. Westside Uyak 73,000 pinks (low estimate). Eastside Uyak 100,000 pinks, 10,000 pinks, 10,000 chums. Difficult to see fish in kelp along westside.
254-202	7-18	Brennan	f	f	f	0	0	9000	0	28000P	34000P 15000Ch	1655 Hrs. "Bay" fish listed for 201, 208, 211, 212. May be bound for this system.
254-202	7-22	Giegerich	g	g		0	0	60000	0	300P	-	Several bears working area. Not many "jumpers" observed at creek mouth - one or two per 10 seconds.
254-202	7-27	Chatto	g	g	g	0	0	14400	57600	-	300000Ch	1515 hrs. Water level low. Jumpers all over flats. Estimate in stream and off mouth considered conservative.
254-202	8- 1	Brennan	f	f	p	0	0	72000	14000	15000P 3000Ch	229000P 36000Ch	1030 hrs. Tide low slack. Bay very murky and muddy. Not many carcasses apparent. Perhaps 2,000. Most of stream chums in little fork to east. Bay fish scattered. 90,000 pinks in channel, 36,000 chums just off flats in mid-bay, and new pinks clear to Amook Island - 42,000 along west side, 47,000 along east.
254-202	8- 4	Prokopowich	e	e		0	0	120000	10000	1085000P	-	Pinks off mouth and head of bay. Good water flow. Did not survey outer bay. Lots of jumpers. All side creeks plugged.
254-202	8-25	Brennan	p	p	p	0	0	0	0	-	-	1600 hrs. Jumpers from creek #206 and across flats. Too muddy to survey.
254-202	8-29	Hander	f	p		0	0	300000	0	200000P	-	1420 hrs. High tide. Water level good. Fish schooled along north and south shore for approximately 1.5 miles.
254-202	9-13	Prokopowich	g	g		0	0	94000	18000	-	-	Plus estimated 24,000 pink and 2,000 chums carcasses.

-Continued-

Stream	Date MM-DD	Observer	Visibility			-----Fish in Stream-----				Build Up Fish		Observer Remarks
			Str	Mou	Bay	Reds	Coho	Pink	Chum	Mouth	Bay	
254-202	9-26	Hander				0	400	100	0	-	-	1115 hrs. Mid low tide. Water level good.
254-202	10- 8	Hander	g	g		0	700	0	0	-	-	1220 hrs. Mid high tide. Water level high. Surveyed approximately 4 miles up river from mouth. No fish off mouth.
East Uyak Creek												
254-203	7- 5	Brennan	f	f	f	0	0	0	0	500P	1000P	1230 Hrs. Surveyed 3 miles of lower creek.
254-203	7- 7	Brennan	p	p	p	0	0	0	0	-	16000P	1330 Hrs. Pinks lining shore to north and some on flats.
254-203	7-10	Chatto	g	g		0	0	0	0	48000P 12000Ch	-	1200 hrs. Low tide. Surveyed upstream 1 mile - no fish in stream. All fish were seen in flats out front. Lots of jumpers all across bay. Estimate on numbers ok, but composition not considered too accurate. Stream flow low.
254-203	7-11	Malloy		g	g	0	0	0	0	22000P	-	Didn't survey creek.
254-203	7-11	Brennan	e	e	g	0	0	1700	0	6000P	45000P	1210 Hrs.
254-203	7-18	Brennan	f	f	f	0	0	4500	750	33000P	76000P 5000Ch	1625 Hrs.
254-203	7-27	Chatto	f	f		0	0	0	50000	100000Ch	-	1500 hrs. Surveyed 3 miles upstream. Turbulent - most fish upstream. Estimate in stream and off mouth considered conservative.
254-203	8- 1	Brennan	f	f	p	0	0	61000	15000	2000P	87000P 16000Ch	1015 hrs. Tide low slack. Bay very murky and muddy; fish not showing. Carcasses along main stem - 17,000 P + 3,000 chum. In slough to north 10,000 chums, 12,000 pinks. In main creek - 5,000 chums, 49,000 pinks. Flats dry.
254-203	8- 4	Prokopowich	e	e		0	0	165000	0	290000P	-	Excellent. Good water flow.
254-203	8-29	Hander	f	p		0	0	50000	0	80000P	-	1410 hrs. High tide. Very conservative estimate off of mouth. Carcasses along entire length of stream and off mouth. Water level moderate. Fish schooled for two miles either side of creek on the N.E. side of bay.
Browns Lagoon												
254-204	7- 7	Brennan	f	f	f	0	0	0	0	-	-	1230 Hrs. No fish seen in bay or creek.
254-204	7-11	Chatto	f			0	0	0	330	-	-	1345 hrs. Mid tide. Surveyed upstream to cascade falls. All fish located from mouth to 1-1/2 miles upstream.
254-204	7-11	Brennan	g	g	g	0	0	1900	0	-	-	1220 Hrs. No fish seen in mouth or bay.
254-204	7-11	Malloy	g	g	g	0	0	0	0	-	-	Nothing in lower creek.
254-204	7-22	Giegerich	g	g	g	0	0	2000	0	-	-	No fish observed in bay or at mouth of stream. Fish in groups of 200 holding in holes along stream.
254-204	7-27	Chatto	g	f		0	0	1500	1000	-	-	1535 hrs. No fish off mouth.

-Continued-

Stream	Date MM-DD	Observer	Visibility			-----Fish in Stream-----				Build Up Fish		Observer Remarks
			Str	Mou	Bay	Reds	Coho	Pink	Chum	Mouth	Bay	
254-204	8- 1	Brennan	f	f	f	0	0	1200	0	800P	-	1055 hrs. Tide low slack. Bay murky. Fish seen jumping outside clear to Carlson Point, but no schools visible.
254-204	8- 4	Prokopowich	e	e		0	0	16500	0	45000P	-	Very good for an odd year return.
254-204	8-10	Hander	f	f		0	0	6600	400	9000P	-	1155 hrs. Outgoing mid tide. Water level good.
254-204	8-19	Kaplan	f	f	f	0	0	20000	0	5000P	10000P	Fish still moving into stream from bay. Highest concentrations found from tide water ranging 1 mile upstream. Fish still very bright; estimate 50 mortalities.
254-204	8-25	Brennan	f	f	f	0	0	34000	0	-	-	1555 hrs. Plus 5,000 carcasses. 50% of fish in lower 30% of river.
254-204	8-29	Hander	f	p		0	0	17000	1000	5000P	-	1317 hrs. Mid high tide. Good water level. Surveyed up to falls.
254-204	8-31	Hastings	g			0	0	30000	0	-	-	Completed egg retention. Estimated 30,000 pinks in stream, 10,000 carcasses.
254-204	9-26	Hander	f	f		0	250	0	0	-	-	1750 hrs. High tide. Water level good. Poor light. No fish in lagoon.
Islands Creek												
254-205	7-18	Brennan	g	g	g	0	0	0	0	-	8000P	1620 Hrs. Fish scattered in cove.
254-205	8- 1	Hander	f	f		0	0	500	0	1500P	-	1504 hrs. Tide high. At least 1,000 carcasses of pinks in stream.
Short Creek												
254-206	7-18	Brennan	f	f	f	0	0	0	0	-	3500P	1615 Hrs. Fish did not appear to be in river yet.
254-206	8- 1	Hander	p	f		0	0	0	0	1000P	-	1501 hrs. Tide high. No count in stream due to brush.
Long Creek												
254-207	7-18	Brennan	f	f	f	0	0	0	0	250P	3000P	1610 Hrs.
254-207	8- 1	Hander	f	p		0	0	1000	0	1200P	-	1454 hrs. Tide high. Numerous schools pinks along shoreline.
Cabin Creek												
254-208	7-11	Malloy	g	g	g	0	0	0	0	2000P	-	Nothing in lower creek.
254-208	7-18	Brennan	f	f	f	0	0	0	0	9000P	10000P	1745 Hrs
254-208	8- 1	Hander	p	f		0	0	1000	0	2000P	-	1510 hrs. Tide high. Numerous schools of pinks all along beach shoreline. 1,000+ carcasses in stream.
Gwen's Creek												
254-209	7-18	Brennan	f	f	f	0	0	0	0	700P	-	1750 Hrs.
254-209	8- 1	Hander	p	f		0	0	0	0	-	-	1531 hrs. Tide high. Cannot see stream due to brush. No count. 1,500+ carcasses off mouth (pinks).

-Continued-

Stream	Date MM-DD	Observer	Visibility			-----Fish in Stream-----				Build Up Fish		Observer Remarks
			Str	Mou	Bay	Reds	Coho	Pink	Chum	Mouth	Bay	
Trap Creek												
254-210	7-18	Brennan	f	f	f	0	0	0	0	5000P	-	1755 Hrs.
254-210	8- 1	Hander	p	g		0	0	0	0	-	-	1527hrs. Tide high. Cannot see due to brush. No count. No fish off mouth. 1,500+ carcasses (pinks) off and in mouth.
Marker Creek												
254-211	7- 5	Brennan		f	f	0	0	0	0	-	1000P	1300 Hrs. Didn't survey creek.
254-211	7-11	Brennan		g	g	0	0	0	0	-	5000P	1205 Hrs. Did not survey creek.
254-211	7-18	Brennan	f	f	f	0	0	0	0	5000P	10000P	1800 Hrs.
254-211	8- 1	Hander	p	f		0	0	0	0	-	-	1526 hrs. Tide high. Cannot see stream due to brush - no count. No fish off mouth.
Ruins Creek												
254-212	7-11	Malloy	g	g	g	0	0	0	0	4000P	-	Nothing in lower creek.
254-212	7-18	Brennan	f	f	f	0	0	0	0	3000P	10000P	1805 Hrs.
254-212	8- 1	Hander	f	f		0	0	1500	1500	-	-	1522 hrs. Tide high. 1,000+ carcasses off mouth. Jumpers off mouth.
254-30	6-27	Prokopowich			g	0	0	0	0	-	8700Ch	2,200 chums on west side. 6,500 chums along east side.
Zachar River												
254-301	7- 7	Brennan	p	p	p	0	0	0	0	-	10000Ch	1215 Hrs. Rough estimate of fish in mid bay.
254-301	7-11	Brennan	g	g	g	0	0	200	1000	29000Ch	2000P 17000Ch	1230 Hrs. Only surveyed 2 miles of creek.
254-301	7-11	Chatto	g			0	0	400	4615	-	-	1300 hrs. Low tide. Surveyed upstream for approximately 10 miles. Fish scattered from mouth upstream 9 miles. Stream flow low. In front of mouth on flats observation limited by chop on water - some jumpers seen.
254-301	7-11	Malloy	g	g	g	0	0	0	2200	3000Ch	39000Ch	Schooled most in upper 1/4 of bay, most heavily near flats.
254-301	7-18	Brennan	f	f	f	0	0	0	2400	17000Ch	31000Ch	1820 Hrs.
254-301	7-22	Giegerich	g	g		0	0	30000	80000	-	-	Observed a 75% to 25% ratio chums to pinks extending to first major fork in system. Very few fish observed thereafter.
254-301	7-27	Chatto	g	f	f	0	0	15000	32000	-	100000Ch	1552 hrs. Survey upstream for 13.5 miles. Chums abundant in lower 10 miles of river.
254-301	8- 1	Brennan	f	f	f	0	0	12800	42000	-	74000P 28000Ch	1105 hrs. Tide low.
254-301	8- 4	Prokopowich	e	e		0	0	95000	47000	120000P	-	Pinks sampling area to mouth.

-Continued-

Stream	Date MM-DD	Observer	Visibility			-----Fish in Stream-----				Build Up Fish		Observer Remarks
			Str	Mou	Bay	Reds	Coho	Pink	Chum	Mouth	Bay	
254-301	8-10	Hander	f	f		0	0	16000	4000	95000P 5000Ch	-	1120 hrs. Outgoing mid tide. Off mouth numerous jumpers 40+ at any one time. Estimate 100 K fish total, 95% pink, 5% chum. Heavy use of side channel spawning upstream. Surveyed upstream 7 miles; water level good.
254-301	8-25	Brennan	p	p	p	0	0	0	0	-	-	1550 hrs. Too muddy to survey. High water.
254-301	8-29	Hander	g	f		0	0	34300	700	30000P	-	1324 hrs. Mid high tide. Surveyed approximately 10 miles from mouth. Very conservative estimate off mouth. Water level good.
254-301	9-18	Brennan	f	f	p	0	0	0	4400	-	-	1345 hrs. Bay and lower 1/2 of stream murky but zero fish showing. Water clearing in upper reaches - dogs in several large schools in deep holes.
254-301	10-14	Probasco	g			0	6000	0	0	-	-	Conservative estimate; every deep pool or hole heavy with coho; approximately 2/3 of river surveyed
254-301	11- 1	Barnes	f			0	3445	0	0	-	-	1535 hrs., surveyed up to forks. Fish distributed fairly evenly from about 2 miles from bay upstream to forks at river mile 10-11.
N.E. Zachar Creek												
254-302	7-11	Malloy	g	g	g	0	0	0	0	-	-	Nothing in lower creek; build-up in bay associated with #301 creek.
254-302	7-27	Chatto	f	p		0	0	0	1500	5000Ch	-	1615 hrs.
254-302	8-10	Hander	g	g		0	0	3000	0	14250P 750Ch	-	1115 hrs. Outgoing mid tide. Estimate 15,000 fish off mouth 95% pink, 5% chum.
Spiridon River												
254-401	7- 7	Brennan	p	p	p	0	0	0	0	-	-	1200 Hrs. Nothing showing in bay; water very murky.
254-401	8-10	Hander	g			0	0	48000	32000	-	-	1100 hrs. Outgoing tide. Mainstem Zachar River glacial, turbid. No survey. Count on Munsey's Lake stream only. Water level good.
254-401	8-25	Brennan	p	p	p	0	0	0	0	-	-	1545 hrs. Water high, river full of mud.
254-401	8-29	Hander				0	0	0	0	-	-	1345 hrs. Mid tide. No count - water too dirty.
254-401	9-18	Brennan	p	p	p	0	0	0	0	-	-	1340 hrs. Bay and stream too murky to survey.
254-401	10-13	Hander	g	g		0	12500	0	0	-	-	1120 Hrs. High tide; water flow good. Fish distributed evenly in upper 7 miles of river. Surveyed to the fork in the upper river.
Clover Rock												
254-402	8- 1	Hander	f	g		0	0	2500	0	5500P	-	1404 hrs. Tide high.
Telrod Cove												
254-403	8- 1	Hander	f	p		0	0	100	0	-	-	1330 hrs. Tide mid-high. Many jumpers in outer bay.

-Continued-

Appendix A.2. (page 24 of 69)

Stream	Date MM-DD	Observer	Visibility			-----Fish in Stream-----				Build Up Fish		Observer Remarks	
			Str	Mou	Bay	Reds	Coho	Pink	Chum	Mouth	Bay		
Chief Cove	254-404	8- 1	Hander	g	f		0	0	1500	0	2500P	-	1349 hrs. Tide high. No count in upper reach of stream due to brush.
	254-404	9-13	Prokopowich	g	g		0	0	1000	0	-	-	Plus 1000 pink carcasses in stream.
Cape Kuliuk	254-405	8- 1	Hander	g	f		0	0	200	0	1500P	-	1355 hrs. Tide high. No count in upper reach of stream due to brush.
	254-405	9-13	Prokopowich	g			0	0	400	0	-	-	-
Karluk River	255-101	6-13	Brennan		f	f	0	0	0	0	5000R	-	1200 Hrs. Fish showing along beach to north of lagoon. No steam survey.
	255-101	8-23	Hastings	e			500	0	8000	0	-	-	Majority of live pinks seen from weir ranging upstream 2 miles. Water running fast and was murky due to rains. Estimate 80-100 carcasses upstream from weir. Also observed reds and 200 kings 1 mile downstream from lake. Did not see any live pinks downstream of weir.
	255-101	8-29	Prokopowich		g	g	0	0	0	0	170000R	375000R	Fish in "Mouth" in lagoon. Reds in "Bay" off entrance to lagoon (most from mouth to Tanglefoot). Good show of jumpers up to waterfalls.
	255-101	9-12	Malloy	P	P	P	8000	4000	0	0	-	-	Lagoon looks very light - fish not showing. Jumpers only at mouth. Poor visibility; chop offshore.
	255-101	9-13	Prokopowich	e	e		45500	500	0	0	-	-	Only fish show in King Hole.
	255-101	9-16	Weir Count	f			1108646	21852	109880	129	-	-	Lagoon survey - 45,500 reds, 500 coho. Most fish in upper end of lagoon. Additional fish below weir. No show off mouth.
	255-101	9-16	Weir Count	f			1108646	21852	109880	129	-	-	Weir in operation 5/22 through 9/16. Plus 10484 kings. Counts include estimates of fish in lagoon after weir pulled.
Cape Uyak	255-102	9-13	Prokopowich	g			0	0	0	0	-	-	Nothing seen. Log jam at mouth.
Low Cape	256-101	7-27	Chatto	p			0	0	0	100	-	-	1100 hrs. All fish just inside mouth. Water level good. No fish off mouth.
	256-101	9-26	Hander	p			0	0	0	0	-	-	1145 hrs. Low incoming tide. High water level. Coho observed in stream but visibility too poor to obtain count.

-Continued-

Stream	Date MM-DD	Observer	Visibility Str Mou Bay	-----Fish in Stream-----				Build Up Fish		Observer Remarks
				Reds	Coho	Pink	Chum	Mouth	Bay	
N. Low Cape 256-102	7-27	Chatto	f	0	0	0	0	-	-	1107 hrs. Water level low. No fish in stream or off mouth.
256-102	9-13	Prokopowich	f	0	0	0	0	-	-	Nothing seen, water very high.
256-102	9-26	Hander	p	0	0	0	0	-	-	1137 hrs. Low incoming tide. Good water level. No fish observed.
Red River 256-201	8-31	Weir Count	f	768101	8242	45655	100	-	-	Weir in operation 5/31 through 8/31. Plus 15432 kings.
256-201	10-26	Hander	g	0	8540	0	0	-	-	1440 hrs. High Tide. Good water level. Survey includes Red Lake River, Bare Creek, mainstem of the river from mouth to east fork, east fork to Fraser flats. Visibility in upper river good, in lower river fair
Old Red River 256-202	7-20	Chatto	g g	0	0	0	0	-	-	1310 hrs. Only surveyed 1/2 of stream to lake...no fish. No jumpers or fish off mouth. Stream flow low.
256-202	7-27	Chatto	p f	0	0	0	0	-	-	1222 hrs. No fish in stream or off mouth. Water level low.
256-202	8-25	Hander	p p	0	0	0	0	-	-	1928 hrs. Mid tide. Lower 1.5 miles turbid. Observed fish attempting to jump falls. Water level high.
256-202	9-13	Prokopowich	p	0	0	0	0	-	-	Too muddy to survey.
256-202	9-26	Hander	f	0	0	0	0	-	-	1120 hrs. Low incoming tide. High water level, lower stream muddy. No fish observed.
Caramel Creek 256-301	7-20	Chatto	g g	0	0	0	0	-	-	1315 hrs. Low tide. No fish in stream or lagoon, no jumpers outside of lagoon. Stream low.
256-301	7-27	Chatto	p f	0	0	0	0	-	-	1228 hrs. No fish in stream, lagoon or off mouth. Water level low.
256-301	8-25	Hander	p	0	0	0	0	-	-	1920 hrs. Mid low tide. Water too turbid, no count. Water level high. 75 yard x 10 yard sheen patch in upper lagoon.
256-301	9-13	Prokopowich	g g	0	600	1500	0	-	-	Coho in upper lagoon.
256-301	9-26	Hander	f f	0	450	0	0	-	-	1109 hrs. Mid low tide. Good water level.
256-301	10- 8	Hander	f f	0	0	0	0	-	-	1053 hrs., high tide. No fish observed.
Halibut Bay 256-302	7-20	Chatto	f g	0	0	0	0	-	-	1329 hrs. No fish in stream, lagoon or lagoon beach. Stream low.

-Continued-

Stream	Date MM-DD	Observer	Visibility		-----Fish in Stream-----				Build Up Fish		Observer Remarks
			Str	Mou Bay	Reds	Coho	Pink	Chum	Mouth	Bay	
256-302	7-27	Chatto	p	f	0	0	0	0	-	-	1237 hrs. No fish in stream, lagoon or off mouth. Water level moderate.
256-302	8-25	Hander	p	p	0	0	0	0	50P	-	1912 hrs. Mid low tide. Water level high.
256-302	9-13	Prokopowich	g	g	0	100	0	0	-	-	Fish in lagoon.
256-302	9-26	Hander	f	g	0	0	0	0	-	-	1104 hrs. Mid low tide. No fish in stream or off mouth. Water level good.
Grant's Lagoon Cr.											
256-303	7-20	Chatto	g	g	0	0	0	0	-	-	1335 hrs. No fish in stream or lagoon. Stream from lagoon to ocean dry (land locked).
256-303	7-25	Brennan	g	g	0	0	0	0	-	250P	1525 hrs. Tide low. Fish seen on outside beach to north (traveling fish?).
256-303	7-27	Chatto	g	g	0	0	0	0	-	450P	1243 hrs. No fish in stream or lagoon. Pinks in bay schooled off beach. Water level low. Lagoon landlocked.
256-303	8-25	Hander	f	f	0	0	0	0	-	-	1908 hrs. Low tide. Mouth still inaccessible, no fish.
256-303	9-13	Prokopowich	f		0	0	0	0	-	-	Nothing seen, water high and muddy.
256-303	9-26	Hander			0	0	0	0	-	-	1100 hrs. Mid low tide. Landlocked no fish.
256-303	10- 8	Hander			0	0	0	0	-	-	1045 hrs, high tide. Lagoon still landlocked. No fish.
256-303A	7-27	Chatto	f	f	0	0	0	0	-	250P	1247 hrs. No fish in stream. Pinks in bay schooled off beach.
Sturgeon River											
256-401	7-10	Chatto	f	f	0	0	0	1390	22500Ch	-	1400 hrs. Low tide. Surveyed entire stream and lagoon. Majority of chums seen in stream were above the forks. 90% of fish in lagoon were in upper lagoon area. Some jumpers in outer lagoon flats. Stream flow low.
256-401	7-11	Chatto	g	g	0	0	0	5000	30000Ch	-	1436 hrs. Low tide. Surveyed entire stream and lagoon. Majority of chums in stream downstream of forks for approximately 2 miles. Stream flow low.
256-401	7-25	Brennan	g	e	0	0	450	2735	150Ch	-	1535 hrs. Tide low. Nothing seen outside or in channels. Few fish in mouth or creek. Few carcasses (<100). Most of fish in a few large schools in lower 1/3 of river.
256-401	7-27	Chatto	g	f	0	0	1250	1560	500P 1000Ch	-	1252 hrs. 500 chums in south fork. Fish lightly scattered from forks downstream.

-Continued-

Stream	Date MM-DD	Observer	Visibility			-----Fish in Stream-----				Build Up Fish		Observer Remarks
			Str	Mou	Bay	Reds	Coho	Pink	Chum	Mouth	Bay	
256-401	8-25	Hander	g	f	f	0	0	100	0	-	-	1830 hrs. Low tide. No fish off mouth or in lagoon. Scattered pinks in lower 3 miles of stream. Visibility fair to poor below fork, no count. Water level high.
256-401	9-13	Prokopowich	g	g		0	200	0	0	-	-	Coho in upper lagoon.
256-401	9-26	Hander	g	g		0	3970	0	0	-	-	1020 hrs. Mid low tide. Water level good. Fish scattered in lower ten miles of river.
256-401	10- 8	Hander	f			0	890	0	0	-	-	1001 hrs. High tide. Water level high. Visibility good in upper river past forks. Fish distributed evenly through mainstem and south fork. Lower river too high and rough to obtain counts.
256-401	10-26	Hander	g			0	3635	0	0	-	-	1355 hrs. High tide. Water level good. Surveyed approximately 20 miles from mouth including the southeast fork. Began seeing coho upstream 3 miles.
East Sturgeon River												
256-402	7-11	Chatto		g		0	0	0	0	-	-	1510 hours low tide. Stream flow low. No stream survey. Surveyed lagoon area at east Sturgeon...no fish.
256-402	7-19	Chatto	f	g		0	0	0	2050	1000Ch	-	0802 hrs. Most fish located upstream approximately 1 mile below forks, numerous carcasses upstream. Water level low. Upper south fork dry.
256-402	7-27	Chatto	f	g		0	0	0	1600		-	1317 hrs. Most fish located 3 miles upstream.
256-402	8-25	Hander	f			0	0	3000	0		-	1855 hrs. Low tide. Few fish in upper river, visibility good in upper river but very few fish. Water level good.
256-402	10- 8	Hander	f	g		0	615	0	0	-	-	1026 hrs. High tide. Water level high. Surveyed 8 miles up from mouth. Upper 4 miles good visibility and fish distributed through this area. Water too rough and high in lower river.
256-402	10-26	Hander	g			0	600	0	0	-	-	1425 hrs. High tide. Water level good. Surveyed upper 4-5 miles of river.
Little Sukhoi												
257-101	7-10	Chatto	g			0	0	0	0	-	-	1420 hrs. Low tide. No fish seen in stream or lagoon - no jumpers. Water flow in stream very low.
257-101	7-20	Chatto	f	f		0	0	0	0	-	-	1120 hrs. No fish observed in stream or off mouth. Stream flow low.
257-101	7-27	Chatto	f	f		0	0	0	430	-	-	1050 hrs. Visibility poor in lower river. Estimate more fish present in lower part of river. Fish spawning to headwaters. No fish in the lagoon.
257-101	8-25	Hander	p			0	0	0	0	-	-	2034 hrs. High tide. Water level high. Too turbid for surveying.

-Continued-

Stream	Date MM-DD	Observer	Visibility		-----Fish in Stream-----				Build Up Fish		Observer Remarks
			Str	Mou Bay	Reds	Coho	Pink	Chum	Mouth	Bay	
257-101	10- 8	Hander	f	f	0	1200	0	0	-	-	1120 hrs. High tide. Water level high. No fish in lagoon.
Big Sukhoi											
257-102	7-10	Chatto	g		0	0	0	0	-	-	1420 hrs. Low tide. No fish seen in stream or lagoon - no jumpers. Water flow in stream very low.
257-102	7-20	Chatto	f	p	0	0	0	100	-	-	1114 hrs. No fish observed in lagoon or off mouth. Visibility poor to fair. Stream flow low.
257-102	7-25	Brennan	g	e f	0	0	2	0	5P	-	1400 hrs. Tide low. Few fish visible. 5 bears in lagoon (waiting?) Water ripple outside - fish flushed out by tide?
257-102	7-27	Chatto	f		0	0	0	0	-	-	1055 hrs. No fish.
257-102	8-25	Hander	g	p g	0	0	0	0	1000P	-	2027 hrs. Mid high tide. Upper stream visibility fair - many pinks, no estimate. Lower stream visibility poor. High water level. 32 swans in lagoon.
257-102	9-26	Hander	f	f	0	0	0	500	-	-	1155 hrs. Mid low tide. Water level high. Fish scattered in lower five miles.
Steep Creek											
257-301	6-17	Brennan	g	g	0	0	0	0	-	15000R	1310 Hrs. Offshore of waterfall - these fish most likely Dog Salmon reds.
Akalura Creek											
257-302	6- 7	Brennan	F	F	0	0	0	0	-	-	1945 Hrs. No stream survey.
257-302	6-11	Brennan	g	g	0	0	0	0	-	-	1810 Hrs. No stream survey.
257-302	6-13	Brennan	f	f	0	0	0	0	-	-	1310 Hrs. No stream survey
257-302	6-15	Brennan	g	g	0	0	0	0	-	3000R	1350 Hrs. Upper Station fish??? No stream survey.
257-302	6-17	Brennan	g	g	0	0	0	0	-	7000R	1330 Hrs. Upper Station fish??? Moving along shoreline.
257-302	6-23	Brennan		p p	0	0	0	0	-	-	1615 Hrs. No stream survey.
257-302	6-27	Prokopowich	g	g g	0	0	0	0	-	1750R	Akalura east side markers - 1,750 Reds.
257-302	7-17	Kuriscak	g		0	0	0	0	-	-	Dolly varden and assorted fry seen - coho fry numerous.
257-302	7-17	Kuriscak	g		0	0	0	0	-	-	Foot survey. Dolly varden and assorted fry seen - coho fry numerous.
257-302	7-19	Ranallo	g		0	0	0	0	-	-	Foot Survey. Dolly varden and assorted fry seen - coho fry numerous.
257-302	7-20	Ranallo	g		0	0	0	0	-	-	Foot survey. Dolly varden and assorted fry seen - coho fry numerous.
257-302	7-21	Ranallo	g		0	0	0	0	-	-	Dolly varden and assorted fry seen - coho fry numerous.
257-302	7-23	Ranallo	g		0	0	0	0	-	-	Coho fry numerous along creek banks and still water.
257-302	7-24	Ranallo	g		0	0	0	0	-	-	2 pinks holding behind weir.

-Continued-

Stream	Date MM-DD	Observer	Visibility			-----Fish in Stream-----				Build Up Fish		Observer Remarks
			Str	Mou	Bay	Reds	Coho	Pink	Chum	Mouth	Bay	
257-302	7-25	Brennan	g	g	f	0	0	0	0	3000R	-	1500 hrs. Tide falling. 2,000 reds in lakes--700 to west, 1,225 to east, 75 to north.
257-302	7-27	Ranallo	g			0	0	1	0	-	-	
257-302	7-28	Scott	g			0	0	1	0	-	-	Foot survey. 3 pinks seen in Akalura prior to Humpy.
257-302	7-29	Ranallo	f			0	0	4	0	-	-	Sockeye and dolly varden present.
257-302	7-30	Ranallo	f			0	0	6	0	-	-	Pinks are hiding under cutbanks, etc. and are often difficult to spot.
257-302	7-31	Ranallo	p			0	0	1	0	-	-	Dolly varden and sockeye present. Dead pink in water prior to Humpy Creek.
257-302	8- 2	Ranallo	p			0	0	0	0	-	-	Poor visibility due to rain and increasing water level.
257-302	8- 2	Chatto	f	p	f	1500	0	0	0	-	-	1500 hrs. High tide. Turbulent at lagoon. Count for lake shore off mouths of creek only. No species separation below weir or lagoon - 600 fish.
257-302	8- 3	Scott	p			0	0	86	0	-	-	Foot Survey. Poor visibility due to high water level. Pinks are hiding under cutbanks.
257-302	8- 6	Scott	g			0	0	11	0	-	-	Foot Survey. Figure does not include 4 dead. All pinks were observed at the (7 DOW) mouth of Humpy Creek - or before.
257-302	8- 6	Ranallo	g			0	0	130	0	-	-	Figure does not include 8 dead. Four of the 8 dead pinks were animal kills on bank of creek.
257-302	8- 8	Ranallo				0	0	12	0	-	-	62 reds, 6 dead reds, 5,000 dolly varden. DV are very thick; beaver dam approximately 2 miles upstream.
257-302	8- 8	Ranallo	f			0	0	12	0	-	-	Figure does not include 4 dead. Two animal kills on bank. Majority of live fish concentrated at Humpy Creek mouth.
257-302	8- 8	Ranallo	f			0	0	48	0	-	-	Figure does not include 51 dead. First 1/3 of creek contained majority of live fish. Majority dead were bear kills.
257-302	8-10	Ranallo	p			0	0	0	0	-	-	2 reds spawned out near mouth.
257-302	8-10	Ranallo	p			0	0	0	0	-	-	Very murky water - didn't go far upstream because of poor visibility.
257-302	8-10	Ranallo	f			0	0	0	0	-	-	3 reds, 0 dolly varden, reds spawned out near mouth.
257-302	8-11	Scott	p			0	0	202	0	-	-	Figure does not include 1 dead. Includes approximately 200 pinks directly in front of weir; couldn't see in certain areas.
257-302	8-11	Scott	p			0	0	171	0	-	-	Foot Survey. Figure does not include 18 dead. Majority of dead bear kills (old).
257-302	8-13	Scott	g			0	0	1189	0	-	-	Foot Survey. Figure does not include 4 dead. Approximately 200 holding in front of weir.

-Continued-

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Stream	Date MM-DD	Observer	Visibility			-----Fish in Stream-----				Build Up Fish		Observer Remarks
			Str	Mou	Bay	Reds	Coho	Pink	Chum	Mouth	Bay	
257-302	8-13	Scott	g			0	0	222	0	-	-	Figure does not include 55 dead. 49/55 dead were bear kills. Encountered bear fishing in creek about 1/2 way through survey.
257-302	9-23	Weir Count	f			116029	4001	49608	3	-	-	Weir in operation 5/19 through 9/23. Counts include estimates of fish in system after weir was out.
257-302	10-26	Hander	g			80000	0	0	0	-	-	1538 hrs. Water level good. No fish in the lagoon. Reds spawning on beaches of lake.
Silver Salmon Creek												
257-303	6-23	Brennan		p	p	0	0	0	0	-	-	1625 Hrs. No stream survey.
257-303	6-27	Prokopowich	g	g	g	0	0	0	0	-	-	Silver Salmon to Stormy Point. 1,500 Reds - scattered schools.
257-303	7-20	Chatto	f	f	p	0	0	0	0	-	-	1144 hrs. No jumpers off mouth. Nothing in lagoon, river, lake or upper streams. Stream flow low.
257-303	7-27	Chatto	f	f		3035	0	0	0	-	-	1115 hrs. 35 reds in stream. 3,000 reds in lake. No fish in lagoon or off mouth.
257-303	8- 1	Hander				0	0	0	0	-	-	-
257-303	8- 2	Chatto	f	f	g	0	0	600	0	-	-	1511 hrs. High tide. All fish observed were in lake. Streams above lake poor visibility (murky)... numerous fish in streams but no count.
257-303	8-25	Hander	f	f		200	0	600	0	-	-	1941 hrs. Mid tide. Reds spawning full length of main tributary, no estimate. Water level good.
257-303	9-17	Hastings	f	f	f	0	0	0	0	-	1Co	Water fairly high due to recent rains. Some what cloudy and fast. Did not observe any fish in lagoon or lake. Observed one jumper at outlet.
257-303	9-26	Hander				0	300	0	0	-	-	1213 hrs. High water level. Coho seen in lagoon, reds observed in lake but no count made.
257-303	10- 8	Hander	p	p		0	1000	0	0	-	-	1107 hrs. Water level high in creek and lake.
257-303	10-26	Hander	f	p		0	100	0	0	-	-	1530 hrs. Water level good. Lake very murky. Fish in lagoon.
Upper Station												
257-304	6- 7	Brennan		F	F	0	0	0	0	-	-	1955 Hrs. No stream survey.
257-304	6-11	Brennan		g	g	0	0	0	0	-	-	1815 Hrs. No stream survey.
257-304	6-13	Brennan		f	f	0	0	0	0	-	-	1330 Hrs. No stream survey
257-304	6-15	Brennan		f	p	0	0	0	0	4000R	-	1325 Hrs. Turbid and choppy offshore. No stream survey.
257-304	6-17	Brennan	g	g	g	0	0	0	0	-	-	1340 Hrs. No fish sighted offshore or in lagoon.
257-304	6-23	Brennan		p	p	0	0	0	0	700R	-	1635 Hrs. Reds in the lagoon. No stream survey.
257-304	6-27	Prokopowich	g			1200	0	0	0	-	-	Too much surf off mouth to see. Fish in creek are below weir. 800 reds in lagoon. 400 in creek.
257-304	7-25	Brennan		g	g	4500	0	0	0	12000R	23300R	1440 hrs. Surveyed lagoon and offshore only. Most of reds to east of mouth (20,000+)

-Continued-

Stream	Date MM-DD	Observer	Visibility			-----Fish in Stream-----				Build Up Fish		Observer Remarks
			Str	Mou	Bay	Reds	Coho	Pink	Chum	Mouth	Bay	
257-304	9-12	Weir Count	f			286288	5319	754	1	-	-	Weir in operation 5/31 through 9/12. Plus 4 kings. Count does not include estimate of fish in lagoon or bay after weir pulled.
Little Dog Salmon Cr												
257-305	6- 7	Brennan	f	f		0	0	0	0	-	-	1935 Hrs. No stream survey.
257-305	6-11	Brennan	g	g		0	0	0	0	-	-	1800 Hrs. No stream survey.
257-305	6-13	Brennan	f	f		0	0	0	0	-	4000R	1300 Hrs. Reds probably traveling to Upper Station. No stream survey.
257-305	6-15	Brennan	g	g		0	0	0	0	-	4000R	1305 Hrs. Upper Station fish? No stream survey.
257-305	6-17	Brennan	g	g		0	0	0	0	-	7000R	1315 Hrs. Likely travelling fish. No stream survey.
257-305	6-23	Brennan	p	p		0	0	0	0	-	-	1610 Hrs. No stream survey.
Narrows Creek												
257-401	7-25	Brennan	g	g	g	0	0	50	25	3000P	10200P	1320 hrs. Tide falling. 7,500 pinks to south in back bay.
257-401	9-15	Giegerich	g	g		0	0	550	0	185P	-	Surveyed only 5 sections of creek.
Horse Marine												
257-402	6- 7	Brennan	f	f		0	0	0	0	-	-	1910 Hrs. No stream surveys.
257-402	6-11	Brennan	G	G		0	0	0	0	-	-	1720 Hrs. No stream survey.
257-402	6-13	Brennan	f	f		0	0	0	0	-	2000R	1250 Hrs. No stream survey.
257-402	6-15	Brennan	g	g		0	0	0	0	4500R	5000R	1245 Hrs. Fish off mouth of lagoon and along beach to south. No stream survey.
257-402	6-17	Brennan	g	g	g	0	0	0	0	-	3000R	1240 Hrs. Nothing seen in lake or lagoon.
257-402	7-20	Chatto	g	f	p	450	0	0	0	-	-	1030 hrs. No fish in lagoon mouth. Some jumpers outside of lagoon. No jumpers in lagoon. 150 reds just below weir in stream. 150 reds above weir, 150 at lake outlet.
257-402	7-25	Brennan	g	g	g	0	0	0	0	450R 2600P	1500P	1245 hrs. Tide falling. Jumpers along south shore to Burkholder's site.
257-402	8-26	Hander	g	f	f	3000	150	0	0	1000Co	-	1320 hrs. Mid tide. Water level good. Reds spawning on N. lake shore, few instream reds, 150 coho near weir, coho jumping off mouth. 1,000 coho in lagoon.
257-402	9-13	Prokopowich	g	g		3400	0	0	0	-	-	Reds spawning north lake shore, good distribution. Few coho jumping in lagoon.
257-402	9-26	Hander	g	f		4000	400	300	0	2300Co	-	1250 hrs. Water level good. 2,000 coho in lagoon, 300 coho off mouth, reds observed spawning along N.E. shore of lake.
257-402	10- 8	Hander	g	f		600	700	0	0	700Co	-	1142 hrs. water level high. All reds observed were lakeshore spawners.

-Continued-

Stream	Date MM-DD	Observer	Visibility		-----Fish in Stream-----				Build Up Fish		Observer Remarks
			Str	Mou Bay	Reds	Coho	Pink	Chum	Mouth	Bay	
Dog Salmon											
257-403	6- 7	Brennan	f	f	0	0	0	0	-	-	1920 Hrs. No stream surveys.
257-403	6-11	Brennan	g	g	0	0	0	0	18000R	26000R	1730 Hrs. No stream survey.
257-403	6-13	Brennan	f	f	0	0	0	0	20000R	28000R	1230 Hrs. No stream survey.
257-403	6-15	Brennan	e	e	0	0	0	0	52000R	70000R	1230 Hrs. Reds not right upon flats; off in deeper water or towards Talifson's bight. No stream survey.
257-403	6-17	Brennan	-	g	g	0	0	0	11000R	160000R	1250 Hrs. Reds have moved "out" since last survey. Most (129,000) along Barker/Omlid beach offshore and along backside of spit to waterfall. An additional 14000 reds along east side. No stream survey.
257-403	6-23	Brennan		p	p	0	0	0	-	200000R	1540 Hrs. Lots of show in Iverson's Bight and on backside of Barkers spit but visibility too poor to see much. No stream survey.
257-403	6-27	Prokopowich	e	e	e	4300	0	0	10000R	32000R	E.F. below weir 1,500R, W.F below weir 2,800R, Barkers to Omlid Spit 10,500R Normal closed waters - 20,500 R, Burkholders to Narrows - 7,000R.
257-403	7-25	Brennan		g	g	0	0	0	43000P	37000P	1300 hrs. Tide falling. 34,000 pinks below weir on east side; 9,000 on west side. 24,000 plus pinks right on beach at Talifson;s Beach. No stream survey.
257-403	8- 2	Chatto	f	p	f	500	0	0	-	-	1550 hrs. Surveyed east fork of river below fishway for reds. All reds located one school 60 yards upstream from confluence with main river.
257-403	8-26	Kaplan	f			1500	7	0	-	-	No live pinks seen when surveyed. Majority of pink carcasses washed out to tide water. Past peak spawning.
257-403	9- 6	Weir Count	f			362007	5668	315559	4690	-	Weir in operation 6/6 through 9/6. Plus 156 kings.
Chip Cove Creek											
257-405	7-25	Brennan	g	g	g	0	0	0	6000P	-	1340 hrs. Tide falling.
Deadman River											
257-502	6-17	Brennan	f	f	f	0	0	0	-	-	1210 Hrs. No stream survey.
257-502	7-10	Chatto	f	f	f	0	0	300	330	-	1245 hrs. Mid tide. Surveyed river upstream for 2 miles. All fish observed from mouth upstream 1-1/2 miles. No fish or jumpers in bay or mouth flats.
257-502	7-18	Chatto	f	f		0	0	15000	0	2000P 1500Ch	1752 hrs. Stream flow low. Jumpers on flats east side.
257-502	7-25	Brennan	g	e	e	0	0	19500	1460	24000P 83200P	1215 hrs. Tide falling. Water in stream low; intermittent flow in upper reach. 47,000 pinks in balls along east side to Alpine Cove. 12,000 P. along westside. Jumpers in middle of bay.

-Continued-

Appendix A.2. (page 33 of 69)

Stream	Date MM-DD	Observer	Visibility			-----Fish in Stream-----				Build Up Fish		Observer Remarks
			Str	Mou	Bay	Reds	Coho	Pink	Chum	Mouth	Bay	
257-502	7-26	Hander	f	g		0	0	32000	3000	14000Ch	-	1549 hrs, 2,000 pinks on north west fork, upstream from forks for approximately 1.5 miles upstream.
257-502	8- 4	Prokopowich	e	e		0	0	410000	5000	80000P	-	Left fork - 125,000 P, 2,000Ch; Right fork - 285,000 P, 7,000 Ch. Pinks off mouth on west side.
257-502	8-25	Brennan	g	g	f	0	0	375000	15000	-	275000P	1620 hrs. Plus 20,000 carcasses.
257-502	8-26	Hander	e	f		0	0	200000	0	50000P	-	0955 hrs. Mid high tide. Heavy spawning in side pools, 5,000 pinks in East Fork. Water level good.
257-502	8-26	Brennan	g	g	f	0	0	398000	15500	-	75000P	1650 hrs. Plus 25,000 carcasses.
257-502	9-13	Prokopowich	g	g		0	0	192000	22000	-	-	West fork water murky - 7,5000 pinks; East fork - 71,000 pinks, 22,000 chums; Middle fork - 46,000 pinks. Channel continuing to change. Live fish count.
257-502	9-15	Giegerich	g	g		0	0	4000	0	11000P	-	Majority of live pinks and carcasses found in intertidal area. Estimating 30,000 carcasses.
257-502	9-26	Hander	g			0	700	4000	0	-	-	1307 hrs. High tide. Water level low.
257-502	10- 8	Hander	f	f		0	600	0	0	-	-	1155 hrs. Mid high tide. Water level good. Surveyed approximately 5 miles up river from mouth. Fish distributed throughout area surveyed. No fish off mouth.
Alpine Cove Creek												
257-503	6-17	Brennan		f	f	0	0	0	0	-	-	1220 Hrs. No stream survey.
257-503	7-18	Chatto	e	g		0	0	150	0	550P	-	1744 hrs. Stream flow good. Few jumpers on flats off mouth.
257-503	7-25	Brennan	g	e	e	0	0	600	275	1000P	6000P	1230 hrs.
257-503	7-26	Hander	e	p		0	0	3000	650	-	-	1544 hrs. Jumpers off mouth. Water level moderate to low.
257-503	8- 4	Prokopowich	e	e		0	0	30000	0	70000P	-	Pinks in lower end. Lots of jumpers in bay.
257-503	8-25	Brennan	g	g	g	0	0	87000	0	-	-	1630 hrs. Plus 5,000 carcasses.
257-503	8-26	Brennan	g	g	g	0	0	83000	0	-	-	1645 hrs. Plus 5,000 carcasses.
257-503	8-26	Hander	e	f		0	0	40000	0	5000P	-	1017 hrs. High tide. Water level good.
257-503	9-26	Hander	e			0	0	0	0	-	-	1303 hrs. Mid high tide. Water level good. Few live pinks in stream, 12,000 carcasses in lower 1 mile of stream and off mouth.
Hellen Creek												
257-504	7-18	Chatto	g	f		0	0	0	0	-	-	1735 hrs. Impassable falls 200 yards up from mouth. No fish below falls or off mouth. 3,000 pinks along west shore between 504 and 503.
257-504	8-25	Brennan	f	f	f	0	0	25000	0	1800P	17000P	1638 hrs. Plus 8,000 carcasses.
257-504	8-26	Hander	g	g		0	0	8000	0	8000P	-	1026 hrs. High tide. Fish present all the way to falls. Water level good.
257-504	8-26	Brennan	g	g	g	0	0	32000	0	38000P	-	1642 hrs. Plus 1,500 carcasses.

-Continued-

Stream	Date MM-DD	Observer	Visibility		-----Fish in Stream-----				Build Up Fish		Observer Remarks
			Str	Mou Bay	Reds	Coho	Pink	Chum	Mouth	Bay	
N.E. Portage											
257-601	7-18	Chatto		f	0	0	0	0	-	-	1720 hrs. Stream goes dry 1/2 mile upstream. No fish in stream or off mouth.
257-601	7-26	Hander		g g	0	0	0	800	-	-	1522 hrs. No fish off mouth. Stream dry after 1.0 miles upstream.
257-601	8-26	Hander		g p	0	0	15000	0	-	-	1054 hrs. Mid tide. Thousands of fish in lagoon, no count. Water level good.
257-601	8-26	Brennan		g g g	0	0	12000	0	12800P	-	1405 hrs. Plus 7,200 carcasses.
Sulua Pink Creek											
257-602	7-18	Chatto		f f	0	0	0	0	4000P	-	1704 hrs. No fish in stream.
257-602	7-21	Brennan		g g g	0	0	0	0	12600P	26000P	1705 Hrs.
257-602	7-26	Hander		f p	0	0	0	500	2000P	-	1530 hrs. Water level moderate.
									15000Ch		
257-602	8-26	Brennan		g g g	0	0	35000	4000	-	-	1632 hrs. Plus 14,000 carcasses.
257-602	8-26	Hander		g g	0	0	17000	0	14000P	-	1040 hrs. Mid high tide. Water level good.
Sulua Chum Creek											
257-603	7-18	Chatto		g g	0	0	250	0	-	-	1650 hrs. No fish in flats off mouth. Water low.
257-603	7-26	Hander		g g	0	0	300	200	500P	-	1535 hrs. Low water.
257-603	8- 4	Prokopowich		e e	0	0	14000	0	10000P	-	-
257-603	8-26	Hander		g g g	0	0	55000	0	10000P	-	1033 hrs. Mid high tide. Water level good.
257-603	8-30	Malloy		e g f	0	0	2800	5500	4000Ch	-	Additional 36K chum and 24K pink carcasses in stream and lagoon. Water flow excellent.
Toms Creek											
257-604	7-18	Chatto		f	0	0	0	0	-	-	1710 hrs. Stream dry. No fish off mouth.
257-604	7-21	Brennan		g g g	0	0	500	0	3000P	5000P	1655 Hrs. Water very low.
257-604	7-26	Hander		g g	0	0	0	3000	1500P	-	1514 hrs. All chums in lower river intertidal area. Low water level upstream.
257-604	8-26	Brennan		g g g	0	0	77000	2000	6000P	-	1614 hrs. Plus 1,000 carcasses.
257-604	8-26	Hander		g g	0	0	1500	0	2000P	-	1045 hrs. Mid high tide. Water level good.
257-604	8-30	Malloy		e g g	0	0	123000	0	-	-	Water flow very good - best ever seen for this date. Additional 100K pink carcasses in stream.
East Portage Creek											
257-605	7-18	Chatto		f	0	0	0	0	9150P	-	1712 hrs. Stream dry. 600 pinks off mouth, 8,550 pinks along west shore of lagoon.
257-605	7-26	Hander		p	0	0	0	0	-	-	1520 hrs. Stream dry. Numerous jumpers off mouth of lagoon. No count or species.
257-605	8-26	Hander		g g	0	0	7000	0	1000P	-	1049 hrs. Mid tide. Water level good.
257-605	8-26	Brennan		f g g	0	0	6900	0	-	2000Ch	1625 hrs. Plus 500 carcasses. Low estimate - poor stream count (brush).

-Continued-

Stream	Date MM-DD	Observer	Visibility			-----Fish in Stream-----				Build Up Fish		Observer Remarks
			Str	Mou	Bay	Reds	Coho	Pink	Chum	Mouth	Bay	
Humpy River 257-701	7-18	Chatto	g	f	f	0	0	129000	0	30000P	50000P	1401 hrs. Surveyed entire streams up to head waters. Fish distributed evenly on entire stream. Water low but o.k. Pinks in bay along north end of beach for approximately 1/2 mile. *Estimate in stream considered very conservative.
257-701	7-21	Brennan	g	g	g	0	0	180000	0	5000P	25000P	1620 HRS. "Bay" fish 1/2 mile to north along beach. Poor visibility in lower 1/4 of creek, in canyon. Estimate of 35,000 in canyon pools likely low.
257-701	7-26	Hander	g	f		0	0	226000	0	25000P	-	1437 hrs. pinks all way up drainage. Water level moderate. Pink estimate along beach for approximately 1.0 miles to north. Many jumpers in deeper water - no count.
257-701	8- 4	Prokopowich	e	e	e	0	0	690000	0	70000P	70000P	Didn't survey complete bay. Pinks from mouth to north marker.
257-701	8-26	Hander	g	f		0	0	400000	0	100000P	-	1120 hrs. Low tide. Thousands of carcasses in stream and off mouth. Water level good.
257-701	8-26	Brennan	g	g	f	0	0	626000	0	260000P	58000P	1545 hrs. Plus mountains of carcasses - hard to estimate #....375,000. New fish outside and along beach to north.
257-701	8-27	Kaplan	f	f	f	0	0	50000	0	100000P	100000P	Live pinks from bay stretching 1/4 mile upstream. Mass buildup of carcasses at mouth of river stacked in some places 2' high on gravel bars; estimate 100,000 carcasses in area. Did not survey past 1/4 mile upstream due to high winds and low ceiling.
257-701	8-30	Malloy	e	e	g	0	0	641000	0	250000P	5000P	Stream breakdown: 260K from lower end to canyon. 81K in canyon, 280K from canyon to headwater. Carcass count: 250K in stream and 350K off mouth. Water flow excellent. Extremely late timing to observe this volume of live fish.
257-701	9- 5	Hastings	p	p		0	0	500000	0	50000P	-	Stream very murky and swift. Large buildup of pinks, 250,000, from tidewater to 1/4 mile upstream (heaviest concentration). Another 250,000 from 1/4 mile to 4.5 miles upstream. Fish thin above 5 miles.
Shag Bluff Creek 257-702	7-21	Brennan	G	G	G	0	0	0	0	9000P	13600P	1645 Hrs. "Bay" fish scattered along beach to south for 2-3 miles - look to be moving south towards Humpy Creek in groups of 100 - 1,000.
257-702	7-26	Hander	g	f		0	0	2500	0	2400P	-	1503 hrs. Pinks along beach for 1.0 miles to north. Very low water in stream. Fish held up in pools.

-Continued-

Stream	Date MM-DD	Observer	Visibility		-----Fish in Stream-----				Build Up Fish		Observer Remarks	
			Str	Mou Bay	Reds	Coho	Pink	Chum	Mouth	Bay		
257-702	8-26	Hander	g	g	0	0	31000	0	-	-	1112 hrs. Mid low tide. Water level good. Fish all the way upstream past fork for at least one mile in both forks. No fish off mouth.	
257-702	8-30	Malloy	e	g	g	0	0	94000	0	-	-	Water flow very good - best ever seen for this date. Additional 22K pink carcasses in stream.
257-702A	7-26	Hander	g	g		0	0	0	8000P	-		1512 hrs. No fish in stream.
257-702A	8-26	Hander	g	p		0	0	65000	0	-	-	1102 hrs. Mid low tide. Water level good. Schools off mouth, visibility too poor to obtain count.
Seaborg Bay Creek												
257-703	7-26	Hander	g			0	0	0	0	-	-	1500 hrs. Terminus of stream landlocked. Water very low - no fish.
Boulder Bay												
258-101	8- 4	Brennan	g	g	f	0	0	1700	0	-	-	1255 hrs. Tide flooding. Pinks well distributed to head of stream.
258-101	9-12	Brennan	g	g	f	0	0	2600	0	-	-	1300 hrs. Plus 2,000 carcasses.
Santa Flavia												
258-201	8- 4	Brennan	e	e	e	0	0	4500	0	3800P	600P	1250 hrs. Tide flooding.
258-201	9-12	Brennan	g	g	f	0	300	4700	5300	-	-	1250 hrs.
Shearwater Bay Creek												
258-202	7-27	Brennan	g	f	p	0	0	200	0	-	-	1646 hrs. Tide flooding. Water very low.
258-202	8- 4	Brennan	e	e	e	0	0	75	0	1100P	-	1245 hrs. Tide flooding.
258-202	9-12	Brennan	g	g	f	0	0	0	3600	-	-	1240 hrs.
Port Otter Creek												
258-203	8- 4	Brennan	e	e	e	0	0	0	0	150P	-	1240 hrs. Tide flooding.
Dog Bay Creek												
258-204	7-27	Brennan		f	p	0	0	0	0	-	1300Ch	1644 hrs. Tide flooding. No stream survey.
258-204	8- 4	Brennan	e	e	e	0	0	0	1000	2300Ch	-	1235 hrs. Tide flooding. Very low water in stream.
258-204	8-26	Brennan	g	g	f	0	0	0	16700	2500Ch	-	1225 hrs. Fish well distributed in sloughs.
258-204	9-12	Brennan	f	f	f	0	0	200	3600	-	-	1225 hrs.
Coxcomb Pt. Creek												
258-205	7-27	Brennan		f	p	0	0	0	0	-	4500Ch	1642 hrs. Tide flooding. No stream survey.
258-205	8- 4	Brennan	e	e	e	0	0	0	1725	1500Ch	2500Ch	1230 hrs. Tide flooding. Chums split evenly between left and right fork of stream.
258-205	8-26	Brennan		g	f	0	0	0	0	3500Ch	-	1230 hrs. No stream survey.
258-205	9-12	Brennan	p	f	f	0	0	300	4400	-	-	1220 hrs. Creek muddy; fish seen in sloughs.

-Continued-

Stream	Date MM-DD	Observer	Visibility			-----Fish in Stream-----				Build Up Fish		Observer Remarks
			Str	Mou	Bay	Reds	Coho	Pink	Chum	Mouth	Bay	
N.Kiliuda Creek	258-206	8- 4 Brennan	e	e	e	0	0	4100	900	-	2100P	1145 hrs. Tide low, flooding. Bay fish scattered clear to outer spit. 1120 hrs. Plus 12,000 carcasses.
	258-206	9-12 Brennan	g	g	f	0	0	200	1800	-	950Ch	
W. Kiliuda Creek	258-207	7-18 Chatto	g	f		0	0	0	250	150Ch	-	1100 hrs. 250 chums first quarter mile of stream, 150 chums on flats off mouth; no jumpers. Water low. 1630 hrs. Tide beginning to flood. 15,000 pinks and 5,000 chums along south shore of bay; 4,500 pinks, 1,500 chums on flats. In stream pinks along south fork, chums along north near mouth.
	258-207	7-27 Brennan	g	g	g	0	0	1900	4700	1800P	19500P	
	258-207	8- 3 Chatto	g	g		0	0	7000	0	5000P	-	1133 hrs. Low tide. Fish schooled along east and west shores off mouth. 1150 hrs. Tide low, flooding. Most of chums in sloughs, pinks in main channel and sloughs. 14,000 chums + 6,500 pinks in balls mid bay, 16,000 chums + 8,000 pinks in balls + bands along south shore to east - in kelp and along beach. Likely more fish in deeper water.
	258-207	8- 4 Brennan	e	e	e	0	0	1350	1875	900P	14500P	
	258-207	8-26 Brennan	g	g	g	0	0	60500	34000	14000P	-	1235 hrs. Plus 5,000+ carcasses. A lot of carcasses likely flushed out in recent high water. Fish not in mainstem, but in intertidal sloughs and side creeks. Peak of spawning. Pinks between tide water and first transect, 500 yards upstream. Only 10 carcasses seen.
	258-207	8-30 Hastings		g		0	0	0	0	25000P	-	
	258-207	8-30 Hander	g	g		0	0	20000	0	400P	-	1910 hrs. Mid high tide. Good water level. 1155 hrs. Plus 40,000 carcasses. 1604 hrs. Low tide. Water level moderate.
	258-207	9-12 Brennan	g	g	f	0	0	1600	11150	-	-	
	258-207	10- 8 Hander	g	g		0	650	0	0	-	-	
Dukaluk Creek	258-208	7-27 Brennan	g	g	f	0	0	900	175	-	-	1620 hrs. Tide low. 1144 hrs. Low tide. Stream was dry. 1200 hr. Tide flooding. Pinks in stream to west, chums in slough to east. Lots of fish in kelp and on flats.
	258-208	8- 3 Chatto				0	0	0	0	-	-	
	258-208	8- 4 Brennan	e	e	e	0	0	200	225	19000P	2000P	
	258-208	9-12 Brennan	g	g	f	0	0	400	3200	-	-	1200 hrs. Plus 12,000 carcasses.

-Continued-

Stream	Date MM-DD	Observer	Visibility			-----Fish in Stream-----				Build Up Fish		Observer Remarks
			Str	Mou	Bay	Reds	Coho	Pink	Chum	Mouth	Bay	
Deer Creek												
258-209	7-27	Brennan		f	f	0	0	0	0	3000P	-	1641 hrs. Tide flooding. No stream survey.
258-209	8- 4	Brennan	e	e	e	0	0	1600	0	2500P	1700P	1228 hrs. Tide flooding.
Kiliuda Spit Creek												
258-210	7-27	Brennan		f	f	0	0	0	0	200P	1200P	1640 hrs. Tide flooding. Likely a lot more fish moving outside. No stream survey.
258-210	8- 4	Brennan	e	e	e	0	0	0	0	-	300Ch	1225 hrs. Tide flooding. Chums along spit.
Marker Grove Creek												
258-211	7-27	Brennan	g	g	f	0	0	0	0	1100P	-	1615 hrs. Tide low.
258-211	8- 3	Chatto	g	g		0	0	400	0	5000P	-	1146 hrs. Low tide. Very low water level and stream was dry 300 yards upstream from mouth.
258-211	8- 4	Brennan	e	e	e	0	0	0	0	-	18000P	1210 hrs. Tide flooding. Pinks all along beach outside mouth - 4,500 to west, 11,000 along beach to east, and 2,500 up toward Pivot Point. Not bound for #211 (?) No water in stream.
258-211	9-12	Brennan	g	g	f	0	0	300	1300	-	-	1205 hrs. Plus 5,000 carcasses.
Pivot Point												
258-212	7-27	Brennan	g	f	p	0	0	0	0	100P	-	1610 hrs. Tide low. Winds increasing; visibility outside to cape poor. A few fish in lagoon.
258-212	8- 3	Chatto		g	f	0	0	0	0	2700P	-	1155 hrs. Low incoming tide. Low water level, stream was dry .5 miles upstream from mouth.
258-212	8- 4	Brennan	e	e	e	0	0	150	0	1000P	20000P	1217 hrs. Tide flooding. Lots of pinks moving along beach in front of lagoon.
258-212	9-12	Brennan	g	g	f	0	0	4000	6500	-	-	1210 hrs.
Bear Camp Creek												
258-213	7-18	Chatto	f	f		0	0	0	0	2000Ch	-	1115 hrs. Stream dry. Fish schooled off mouth along shore both sides. Lots of jumpers.
258-213	7-27	Brennan	g	g	f	0	0	0	0	-	-	1625 hrs. Tide low. Fish moving along outside but probably headed for #207.
258-213	8- 3	Chatto				0	0	0	0	-	-	1143 hrs. Low tide. Stream was dry.
258-213	8-26	Brennan	g	g	g	0	0	28500	1800	3300P 100Ch	-	1235 hrs.
Amee Bay Creek												
258-301	9-15	Brennan	g	g	f	0	0	800	6000	-	-	1525 hrs. Plus 2,000 carcasses.
McCord Beach												
258-302	8-30	Malloy	f	f	f	0	0	1500	6000	-	-	Additional 1,500 chum carcasses and 2,000 pink carcasses. Water flow excellent.

-Continued-

Stream	Date MM-DD	Observer	Visibility			-----Fish in Stream-----				Build Up Fish		Observer Remarks
			Str	Mou	Bay	Reds	Coho	Pink	Chum	Mouth	Bay	
Left Cape Creek												
258-303	8- 3	Chatto				0	0	0	0	-	-	1200 hrs. Low incoming tide. Stream was dry.
258-303	9-15	Brennan	g	g	f	0	0	2	0	-	-	1500 hrs.
Ghost Rocks Creek												
258-304	8- 3	Chatto	g	g		0	0	3000	0	1300P	-	1202 hrs. Low incoming tide. Very low water level, stream was dry 1 mile upstream from the mouth.
258-304	9-15	Brennan	g	g	f	0	0	2300	0	-	-	1505 hrs. Plus 2,500 carcasses in mouth and stream.
Nut Island Creek												
258-305	8- 3	Chatto	g	g		0	0	0	0	700P	-	205 hrs. Low incoming tide. Very low water level, dry in spots.
258-305	9-15	Brennan	g	g	f	0	0	575	0	-	-	1510 hrs. Plus 1,300 carcasses in mouth.
Bush Point Creek												
258-306	8- 3	Chatto				0	0	0	0	-	-	1125 hrs. Low tide. Stream was dry.
258-306	9-15	Brennan	f	f	f	0	0	150	0	-	-	1525 hrs. Plus 2,000 carcasses.
Fugitive Creek												
258-307	7-27	Brennan		g	g	0	0	0	0	4800P	-	1605 hrs. Tide low. Fish scattered over flats by stream mouth. No survey of creek.
258-307	9-13	Malloy	F	F	F	0	0	1100	0	-	-	Water flow very good. Moderate carcass accumulation.
Ocean Beach												
258-401	7-27	Brennan	g	g	f	425	0	0	0	-	-	1552 hrs. Tide low. Reds in upper lake (125) and in channel between lakes (300). A few fish visible in surf to south (traveling pinks?).
258-401	9-13	Malloy	G	P	P	11000	800	0	0	-	-	Water level in lake good. Sockeye very colored, coho getting dark. Should have been more coho showing off mouth.
Rolling Bay												
258-511	8-25	Brennan	f	f	f	0	0	0	12400	10000Ch	-	1700 hrs.
258-511	9-15	Brennan	g	g	a	0	400	0	32000	-	-	1615 hrs. Plus 15,000 carcasses.
Natalia Bay												
258-512	8-25	Brennan	f	f	f	0	0	0	1800	5000Ch	-	1710 hrs.
258-512	8-30	Malloy	e	g	g	0	0	11000	28000	12000Ch	500Ch	Additional 15K chum carcasses in stream and lagoon. Water flow very good.
Newman Bay												
258-513	8-25	Brennan	f	f	f	0	0	0	2050	6500Ch	-	1715 hrs.
258-513	9-15	Brennan	g	g	f	0	0	0	8600	-	-	1600 hrs. Plus 5,000 carcasses.

-Continued-

Stream	Date MM-DD	Observer	Visibility			-----Fish in Stream-----				Build Up Fish		Observer Remarks
			Str	Mou	Bay	Reds	Coho	Pink	Chum	Mouth	Bay	
Natalia Cabin Creek 258-514	8-30	Malloy	f	f	f	0	0	10800	1200	-	-	Additional 25K dead pinks, 100 dead chums. Water flow good.
Midway Creek 258-521	7-18	Chatto	e	f	f	0	0	2500	400	1000P 1000Ch	20000P	1202 hrs. Pinks in lower 3/8 mile of stream. Pinks in bay 20,000 along west shore approximately 1 mile from mouth. Water low.
258-521	7-27	Brennan	e	e	g	0	0	9200	0	2000P	2700P	1532 hrs. Tide low. Majority of fish schooled up in lower reaches.
258-521	8- 3	Chatto	g	g		0	0	7500	0	1000P 1500Ch	-	1116 hrs. Low tide. Surveyed lower 6 miles.
258-521	8-30	Hander	g	f		0	0	15000	0	-	-	1900 hrs. Mid high tide. No fish off mouth. Surveyed approximately 5 miles up from mouth. Most fish in. Moderate water level.
258-521	9-15	Brennan	g	g	f	0	2500	5000	2300	500Co 200Ch	-	1530 hrs. Majority of fish in lower river. Plus 75,000 carcasses, 90% pinks (?)
258-521	10- 8	Hander	g	g		0	2300	0	0	-	-	1543 hrs. Low tide. Fish observed approximately 10 miles up from mouth. Stopped survey at forks.
Barling Creek 258-522	7-18	Chatto	g	f	f	0	0	0	0	-	10000P	1215 hrs. Numerous pinks along west shore to straits and along beach to west. Water low.
258-522	7-27	Brennan	g	g	g	0	0	22000	0	9000P	68000P	1512 hrs. Tide low. 48,000 pinks in kelp south of channel by side creek; 12,000 pinks in kelp mid-bay; 8,000 pinks south side of bay.
258-522	8- 3	Chatto	g	g		0	0	21000	0	30000P	-	1104 hrs. Low tide. Water level low. Fish extended from mouth along western shoreline 1.5 miles.
258-522	8- 4	Prokopowich	e	e	e	0	0	43000	0	-	125000P	Looks very good.
258-522	8-25	Brennan	p	p	p	0	0	0	0	-	-	1735 hrs. Too turbid and muddy for survey.
258-522	8-26	Brennan	g	g	f	0	0	53300	0	6000P	-	1255 hrs. Plus 10,000+ carcasses. Most of carcasses washed out in recent flood; this is a rough (low) estimate.
258-522	8-30	Hander	g	f		0	0	30700	0	10000P	-	1853 hrs. Mid high tide. Low water level.
258-522	9-12	Hastings	g	g		0	0	6000	0	3000P	-	Majority of live pinks found from tide water to 3/4 mile upstream. Only 200+ beyond that. Estimating 3000 carcasses.
258-522	9-15	Brennan	g	g	f	0	0	35000	10000	-	-	1545 hrs. Plus 100,000 carcasses.
258-522	10- 8	Hander	g	g		0	1600	0	0	-	-	1532 hrs. Low tide. Water level good. No fish in lagoon.
Lagoon Creek 258-524	10-26	Dolezal	f			0	40	0	0	-	-	Foot Survey.

-Continued-

Stream	Date MM-DD	Observer	Visibility		-----Fish in Stream-----				Build Up Fish		Observer Remarks	
			Str	Mou Bay	Reds	Coho	Pink	Chum	Mouth	Bay		
West Three Saints 258-531	7-18	Chatto	g	g	0	0	0	0	-	-	1225 hrs. No fish in mouth or stream. Water level low.	
SW Three Saints 258-532	7-18	Chatto	g	g	0	0	0	0	-	-	1227 hrs. No fish in mouth or streams. Water level low.	
NE Three Saints 258-533	7-18	Chatto	g	g	0	0	0	0	-	-	1220 hrs. No fish in mouth or stream. Water level low.	
Kaiugnak Point 258-541	7-18	Chatto	g	g	0	0	0	0	150Ch	-	1304 hrs. No fish in stream. Water low. No jumpers off mouth.	
258-541	7-26	Hander	g	g	0	0	1000	0	1000P	-	1220 hrs. No jumpers off mouth. Stream dry except for lower 0.5 miles, stream flow very low.	
258-541	8- 3	Chatto	g	g	0	0	4500	0	-	-	1050 hrs. Mid-tide. Water level good. 65% of fish were just inside mouth.	
258-541	8-26	Hander	g	f	0	0	50000	0	-	-	1307 hrs. Mid high tide. Water level moderate. Few fish in upper stream, no fish off mouth.	
258-541	8-26	Brennan	g	g	g	0	0	30500	0	11000P	-	1340 hrs. Plus 2,000 carcasses. 70% of fish in lower 1/4 mile.
258-541	10- 8	Hander	g	g	100	300	0	0	-	-	1517 hrs. Mid low tide, water level low, reds were very colored and spawning in slow shallow water. No fish off mouth.	
258-541A	7-18	Chatto	g	g	0	0	0	0	-	-	1302 hrs. No fish. Falls at mouth.	
Kaiugnak Lagoon 258-542	6-17	Brennan		f	f	0	0	0	0	-	-	1200 Hrs. No stream survey.
258-542	7-18	Chatto	g	g	0	0	0	0	25330Ch	-	1317 hrs. No fish in stream. Water low. Numerous schools chums in lagoon.	
258-542	7-26	Hander	g	g	0	0	0	100	2000P	-	1225 hrs. Stream flow low. Chums and pinks identified for mouth were all in lagoon.	
258-542	8- 3	Chatto	g	f	g	0	0	4000	0	2500Ch	-	1043 hrs. Mid-tide. Many jumpers off mouth but glare and wind on water hindered survey. Water level good.
258-542	8- 4	Prokopowich	e	e	e	0	0	11000	0	36000P	-	Good water flow.
258-542	8-25	Brennan	g	g	f	0	0	78000	0	-	-	1645 hrs. Plus 8,000 carcasses.
258-542	8-26	Hander	g	f	f	0	0	41000	0	2000P	-	1300 hrs. Mid high tide. Water level good. Fish all the way to falls. Thousands of carcasses off mouth.
258-542	8-26	Brennan	g	g	g	0	0	21100	0	-	-	1350 hrs. Plus 13,000 carcasses. 15% of fish in sloughs or side channels.

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Stream	Date MM-DD	Observer	Visibility			-----Fish in Stream-----				Build Up Fish		Observer Remarks	
			Str	Mou	Bay	Reds	Coho	Pink	Chum	Mouth	Bay		
258-542	8-30	Malloy	f	f	f	0	0	76000	10000	-	-	Additional 30K pink carcasses and 5K chum carcasses in lagoon. Live chums primarily in lagoon slough.	
258-542	9-12	Hastings	g			0	0	3250	0	-	-	Past peak spawning. Live pinks from tidewater to 1 mile upstream. Estimating 750,000 carcasses on tide flats.	
258-542	9-15	Brennan	g	g	f	0	0	5900	0	-	-	1640 hrs. Plus 15,000 carcasses.	
Bruin Creek													
258-544	7-18	Chatto	g	g		0	0	0	0	-	-	1318 hrs. No fish in stream. Water low.	
258-544	7-26	Hander	f			0	0	0	0	-	-	1237 hrs. No fish, low water.	
258-544	8- 4	Prokopowich	e	e		0	0	2000	0	3000P	-	-	
258-544	8-25	Brennan	f	f	f	0	0	17000	0	-	-	1645 hrs. Plus 13,000 carcasses.	
258-544	8-26	Brennan	g	g	g	0	0	5000	0	-	-	1345 hrs. Plus 17,000 carcasses.	
258-544	8-26	Hander	g	f		0	0	3000	0	300P	-	-	1257 hrs. Mid high tide. Thousands of carcasses off mouth. Water level good.
258-544	9-15	Brennan	f	f	f	0	0	900	0	-	-	1650 hrs. Plus 5,000 carcasses.	
258-544	10- 8	Hander	g	g		0	60	0	0	-	-	1511 hrs. Mid low tide, moderate water level.	
Kiavak Portage													
258-551	7-18	Chatto	g	p		0	0	0	0	200Ch	-	-	1320 hrs. Upper river dry, last 1/4 mile flow very low. No fish in stream or off mouth. Chums in inner lagoon.
258-551	7-26	Hander	g	f		0	0	0	0	1500P	-	-	1245 hrs. No fish in stream. One small school fish type and number unknown. Water level low. Stream dry in sections, water flow only in lower 0.5 miles.
258-551	8- 3	Chatto	g	f	f	0	0	50	0	200P 250Ch	-	-	1030 hrs. Mid-tide. Water level good. Turbulent-hard to survey.
258-551	8-26	Brennan	g	g	g	0	0	2400	0	-	-	1400 hrs. Plus 3,000 carcasses.	
258-551	8-26	Hander	g	f	f	0	0	3000	0	1300P	-	-	1243 hrs. High tide. Water level good. Few pinks in lagoon off stream mouth.
258-551	9-15	Brennan	f	f	f	10	0	2600	0	-	-	1630 hrs. Plus 3,000 carcasses.	
Kiavak Lagoon													
258-554	7-18	Chatto		g		0	0	0	0	4000Ch	-	-	1322 hrs. Stream dry. Chums off mouth.
258-554	7-26	Hander	f			0	0	0	0	-	-	-	1245 hrs. Lower 0.25 miles dry. No fish.
258-554	8- 3	Chatto	g			0	0	0	0	-	-	-	1035 hrs. Mid-tide. Water level o.k. Last survey creek was dry. Too turbulent to survey in creek.
258-554	8-26	Hander	g	f		0	0	1000	0	-	-	-	1247 hrs. Mid high tide. Water level good. No fish off mouth.
Kiavak Spit													
258-555	7-18	Chatto		g		0	0	0	0	500Ch	-	-	1325 hrs. Stream dry. Chums off mouth.
258-555	7-26	Hander	f			0	0	0	0	-	-	-	1245 hrs. no fish. Stream dry.

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Stream	Date MM-DD	Observer	Visibility			-----Fish in Stream-----				Build Up Fish		Observer Remarks
			Str	Mou	Bay	Reds	Coho	Pink	Chum	Mouth	Bay	
258-555	8-26	Hander	p	f		0	0	300	0	-	-	1251 hrs. High tide. Water level good. Few hundred pinks instream, very brushy, hard to count. No fish off mouth.
Jap Bay 258-601	7-26	Hander	f	f		0	0	0	0	3500P 300Ch	-	1251 hrs. Stream dry.
258-601	8-26	Hander	g	f		0	0	4000	0	300P	-	1210 hrs. High tide. Water level good. Many carcasses off mouth. Conservative estimate. Stream concealed with brush.
Kaguyak Bay Creek 258-602	7-21	Brennan	g	g	g	0	0	300	0	2800P	12300P	1530 Hrs. Fish scattered throughout bay along beach and rocky shores southeast of creeks.
258-602	7-26	Hander	g	f		0	0	1500	15	2500P 5000Ch	-	1302 hrs. Low water.
258-602	8-26	Brennan	g	g	g	0	0	50400	0	6600P	-	1415 hrs. Plus 12,000 carcasses.
258-602	8-30	Malloy	g	g	g	0	0	38000	0	-	-	Water flow good. 40,000 carcasses, of which 30% chum, 70% pinks.
Kaguyak Fox Creek 258-603	7-26	Hander	f			0	0	0	20	-	-	1314 hrs. Low water.
258-603	8-26	Hander	g	g	g	0	0	30000	0	-	3000P	1200. High tide. Water level good. Few pinks off mouth.
258-603	8-26	Brennan	g	g	g	0	0	11000	0	-	-	1420 hrs.
258-603	8-30	Malloy	g	g	g	0	0	42000	0	-	-	Water flow good. 25,000 carcasses, of which 60% chums, 40% pinks.
Seven River 258-701	7-18	Chatto	f	f		0	0	4760	0	14000P	-	1343 hrs. 2,010 pinks in north fork, 2,750 pinks in south fork. Water level low but looks o.k.
258-701	7-21	Brennan	g	g	g	0	0	65900	0	10000P	14000P	1600 Hrs. The majority of stream fish in lower 1/3 of river, from mouth to just above fork.
258-701	7-26	Hander	g	f		0	0	78500	0	9000P	-	1334 hrs. Water flow moderate. 26,000 P in north fork, 32,000 below falls on south fork of 20,500 P from forks to mouth.
258-701	8- 4	Prokopowich	g	g		0	0	159000	0	50000P	-	Good water flow - Right fork - 68,000; Left fork - 60,000; Below forks 31,000.
258-701	8-26	Brennan	g	p	p	0	0	366000	0	200000P	-	1435 hrs. Plus 40,000 carcasses in stream and 25,000 carcasses at mouth. More likely washed out into bay. Water outside mouth murky; could be more than 200,000.
258-701	8-26	Hander	g	f		0	0	110000	0	100000P	-	1140 hrs. High tide. Water level good. Thousands of carcasses. 10,000 in S. fork, 75,000 in main stem, 25,000 from mouth to fork. Very conservative estimates in stream and off mouth.

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Stream	Date MM-DD	Observer	Visibility			-----Fish in Stream-----				Build Up Fish		Observer Remarks
			Str	Mou	Bay	Reds	Coho	Pink	Chum	Mouth	Bay	
258-701	8-30	Malloy	g	e	e	0	0	450000	0	5000P	-	Water flow good. 125,000 live and 160,000 dead W. Fork; 325,000 live and 275,000 dead N. Fork and mainstem. 180,000 carcasses off mouth.
258-701	9- 5	Hastings	f			0	0	50000	0	-	-	Water muddy and swift. Heaviest concentrations from mouth to 2.5 miles upstream.
Walter's Creek												
258-702	7-26	Hander	f	g		0	0	0	0	11000Ch	-	1350 hrs. All chums along beach south from mouth. Water flow moderate.
258-702	8-26	Brennan	g	g	f	0	0	55000	0	24000P	9000P	1450 hrs. Plus 25,000 carcasses - likely more washed out. More fish along shore to south.
258-702	8-30	Malloy	e	e	g	0	0	68000	0	36000P	-	Water flow excellent. 35,000 carcasses in stream, 80,000 carcasses off moputh.
Tundra Lakes Creek												
258-703	7-26	Hander	p	f		0	0	0	0	-	-	1328 hrs. No fish off mouth. Lots glare on stream surface. Very few (<100) fish in stream.
258-703	8-26	Brennan	g	g	p	0	0	22500	0	-	-	1427 hrs.
258-703	8-30	Malloy	e	e	g	0	0	47000	0	1500P	-	Water flow very good; 20,000 dead in creek, 5,000 dead off mouth.
Sow Creek												
258-704	7-26	Hander	p			0	0	0	0	-	-	1331 hrs. No fish.
258-704	8-30	Malloy	g	g	g	0	0	0	0	-	-	Log jam. No fish.
Melavedof Creek												
258-705	7-26	Hander	p			0	0	0	0	-	-	1318 hrs. No fish in stream. Lots junk (mousse?) in stream lower part.
258-705	8-26	Brennan	g	g	p	0	0	8700	0	-	-	1425 hrs.
258-705	8-30	Malloy	e	e	e	0	0	19000	0	-	-	Stream flow good. 15,000 carcasses at mouth.
Kaguyak Village Crk.												
258-706	7-26	Hander	p	f		0	0	0	0	3000Ch	-	1323 hrs. No fish in stream.
No Name												
258-707	7-26	Hander	f			0	0	100	200	-	-	1327 hrs. No fish off mouth.
Dolina Point												
258-801	8-30	Malloy	g	g	f	0	0	0	1200	-	-	Additional 600 chum carcasses in stream. Water flow good.
Whirlpool Point												
258-803	8-30	Malloy	g	g	g	0	0	0	0	-	-	Water flow good; no barrier to stream.

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Stream	Date MM-DD	Observer	Visibility Str Mou Bay	-----Fish in Stream-----				Build Up Fish		Observer Remarks
				Reds	Coho	Pink	Chum	Mouth	Bay	
Camp Creek 258-804	8-30	Malloy	f f f	0	0	0	0	-	-	Good water flow.
Bend Creek 258-805	8-30	Malloy	e g f	0	0	0	0	-	-	Access to lagoon blocked by gravel build-up on beach.
Pyramid Creek 258-807	8-30	Malloy	g e e	0	0	0	900	-	-	Additional 600 chum carcasses in stream. Water flow good.
Strip Creek 258-808	8-30	Malloy	g	0	20	100	400	-	-	Additional 300 dead chum and 100 dead pinks. Coho in lower end.
Glotecloss Creek 258-809	8-30	Malloy	g g f	0	0	0	0	-	-	Good water flow - should have fish.
258-810	8-30	Malloy	g g f	0	0	0	300	200Ch	-	Additional 100 chum carcasses in stream. Water flow good.
Passage Creek 258-851	8-30	Malloy	e e g	0	400	0	2100	-	-	Additional 100 chum carcasses. All coho in lagoon.
South View Creek 258-852	8-30	Malloy	g g f	0	0	0	0	-	-	100 dead pinks.
Russian Harbor 258-901	7-26	Hander	g p	0	0	0	0	-	-	1406 hrs. No fish in stream but few jumpers pinks off mouth of stream.
258-901	8-26	Brennan	g g f	0	0	1800	0	1500P	-	1540 hrs.
E. Russian Creek 258-902	7-26	Hander	p p p	0	0	0	0	-	-	1405 hours, no fish in stream or off mouth in lagoon. Fish off mouth of lagoon. Visibility poor - no count.
258-902	8-26	Brennan	g g f	0	0	17000	0	25000P	-	1530 hrs.
Kevin Creek 258-903	7-26	Hander	g f	0	0	0	0	3000P	-	1403 hrs. No fish in stream.
Reef Creek 258-904	7-26	Hander	f f	0	0	0	0	2000P	-	1355 hrs. No fish in stream.

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Stream	Date MM-DD	Observer	Visibility			-----Fish in Stream-----				Build Up Fish		Observer Remarks
			Str	Mou	Bay	Reds	Coho	Pink	Chum	Mouth	Bay	
Monashka Creek												
259-101	8- 4	Brennan	e	e	e	0	0	475	0	1500P	3500P	1640 hrs. Tide high.
259-101	8-30	Brennan	f	f	f	0	0	8000	0	4000P	-	1635 hrs.
259-101	9-13	Brennan	f	g	g	0	0	800	0	150Co 300P	-	1230 hrs. Plus 1,500 carcasses in creek and 15,000 carcasses in bay.
Pillar Creek												
259-102	7-16	Swanton	f			0	0	50	0	-	-	Foot survey. Figure does not include 1 dead. (?) lots of glare from sun. 1 dead pink one mile upstream. 1 pool 1/2 mile upstream 30 pinks, 10 dollys, pool 3/4 mile upstream near lagoon. 20 pinks, 16 dollys.
259-102	7-19	Swanton	e			0	0	62	0	-	-	Foot survey. 3 humps in pool 1/2 mile from terminus, 5/8 mile 3 humps, 3/4 mile 1 hump, 1.5 mile below culvert 12 humps, pool below reservoir 8 humps.
259-102	7-21	Dill	f			0	0	49	0	-	-	Foot survey. CAVU, glare from sun. 9 humps 1/8 mile from (?) in pool, 8 in pool 1/2 mile from terminus, 1 pink 5/8 mile, 25 in pool below culvert from road, 6 in pool below reservoir.
259-102	7-24	Swanton	g			0	0	63	0	-	-	Foot Survey. 25% cloud cover. 1/2 mile pool 30 humps, 5/8 cutbank 1 hump, 1.2 mile 6 humps, 1.22 mile 4 humps, cutbank 1 (?) below road 1 hump, pool belowculvert 15 pool ???????
259-102	7-27	Swanton	g			0	0	132	0	-	-	Foot survey. CAVU. .25 mile pool 16 humps, .375 10 humps cutbank, .375 pool 65 humps, 10 humps under cutbank. 1.0 mi. 5 humps, 1.2 mi 1 hup, 1.2 mi 1 hump, 1.3 3 humps, 1.4 culvert 15 humps.
259-102	7-30	Kaplan	g			0	0	396	0	-	-	Foot survey. Cloudy, some glare. 10 dolly varden with pink spaghetti tags.
259-102	8- 2	Giegerich	f			0	0	414	0	-	-	Foot Survey. Figure does not include 8 dead. Majority of fish still in (?) and in pools. Carcasses up arm.
259-102	8- 4	Brennan	e	e	e	0	0	375	0	4900P	5300P	1645 hrs. Tide high.
259-102	8- 5	Ralston	g			0	0	743	0	-	-	Foot Survey. Figure does not include 21 dead.
259-102	8- 8	Dill	p			0	0	933	0	-	-	Foot survey. Figure does not include 64 dead. More dead males than females.
259-102	8-11	Swanton	e			0	0	3518	0	-	-	Foot survey. Figure does not include 69 dead. Jumpers at mouth. Very little (less than 10%) spawning. Most of fish holding in the large pools.
259-102	8-15	Swanton	f			0	0	4510	0	-	-	Foot survey. Figure does not include 232 dead. Mouth full of jumpers, 20,000+ off mouth.

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Stream	Date MM-DD	Observer	Visibility			-----Fish in Stream-----				Build Up Fish		Observer Remarks
			Str	Mou	Bay	Reds	Coho	Pink	Chum	Mouth	Bay	
259-102	8-23	Dill	f			0	0	33052	0	-	-	Foot survey. Figure does not include 631 dead. Jumpers at mouth. Lots of fish waiting to come in.
259-102	8-27	Swanton	f			0	0	42100	0	-	-	Foot survey. Figure does not include 718 dead.
259-102	8-30	Brennan	f	f	f	0	0	32700	0	25Co	-	1640 hrs. Plus 6,000 carcasses.
259-102	8-31	Brockman	g	g		0	0	25000	0	300P	-	Foot survey. Surveyed entire creek from tidewater to reservoir. Live pinks throughout creek with highest concentrations in deep pools. Estimated 5,000 carcasses.
259-102	9-13	Brennan	f	g	g	0	0	1500	0	-	-	1225 hrs. Plus 10,000 carcasses.
259-105	8- 4	Brennan	e	e	e	0	0	200	0	-	-	1635 hrs. Tide high.
259-105	8-30	Brennan	f	f	f	0	0	4000	0	3000P	-	1635 hrs.
Buskin River												
259-211	9- 7	Hastings	f			0	25	5550	0	-	-	Foot survey. Did not survey upper reaches of river or tributaries beyond lake. Only 5 sections surveyed. Plus 1700 carcasses.
259-211	9-13	Brennan	f	f	f	0	1500	48000	0	750Co	-	1615 hrs. Above weir- 20,000 live and 20,000 carcasses, below weir - 28,000 live and 45,000 carcasses.
259-211	10- 2	Weir Count	f			17853	9930	159123	79	-	-	Weir in operation 4/20 through 10/2.
Sargent's Creek												
259-221	9-12	Brennan	g	g	f	0	0	22000	0	21000P	-	955 hrs. Plus 1,500 carcasses in stream and 7,500 carcasses in bay.
Russian River												
259-222	7-31	Brennan	p	f	f	0	0	1300	0	1500P	750P	1425 hrs. Tide high. Very turbulent so limited stream survey.
259-222	9-12	Brennan	g	g	f	0	0	36500	1800	-	-	1000 hrs. 90% of fish in lower 1/2 mile and intertidal area. Plus 5,000 carcasses in stream, 25,000 carcasses in bay, and 10,000 carcasses in slough.
Solonie Creek												
259-223	7-31	Brennan	f	g	g	0	0	1600	0	7600P	4800P	1415 hrs. Tide high. Pinks in small dabs along flats and along shore to southeast. Limited stream survey due to turbulence.
259-223	9-12	Brennan	g	g	f	0	200	113000	0	-	-	1010 hrs. 50% in lower 1/4 mile and intertidal, remainder well distributed. Lots of carcasses.

-Continued-

Stream	Date MM-DD	Observer	Visibility			-----Fish in Stream-----				Build Up Fish		Observer Remarks
			Str	Mou	Bay	Reds	Coho	Pink	Chum	Mouth	Bay	
American River												
259-231	7-31	Brennan	f	f		0	0	0	0	-	9700P	1435 hrs. Tide high. 1 large school along south shore, the rest in dabs. No stream survey.
259-231	8- 4	Brennan	g	g	g	0	0	3100	175	1500P	111000P	1700 hrs. Tide high. 1 king!!! 45,000 pinks bunched up off mouth; 48,000 pinks along beach to dock; 18,000 pinks offshore.
259-231	8- 4	Prokopowich	e	e		0	0	2000	0	8000P	-	1,000 Dolly Varden in creek. Did not survey off mouth or in bay.
259-231	8-26	Brennan	g	g	g	0	0	72500	7800	10000P	700Co 5000P	1140 hrs. Plus 26,000 carcasses. 75% of fish in lower river, plus sloughs plugged.
259-231	9-12	Brennan	g	g	f	0	0	152000	0	-	-	1025 hrs. Plus 25,000 carcasses. Fish in upper reaches, dark, below pretty wasted.
259-231	9-25	Malloy	e	g	g	0	2500	126000	11000	-	-	Huge accumulation of pink carcasses at stream's mouth and on stream delta. Pinks schooled heavily in pools as well as spawning heavily on all major riffles and heavily on all side sloughs. Chums distributed evenly between lower portion of main stem and in sloughs on north side of valley. Coho most noticeable in deep pools in with pinks. Largest concentrations near Mother's Hole and entrance to sloughs and side tributaries.
259-231	10-26	Holmes	f			0	296	0	0	-	-	Surveyed 10/25-26, less coho than expected for this date. Visibility excellent in tribs, fair in mainstem, poor in few holes on mainstem. Distribution of coho: 22 in spring tribs, 125 at junction of tribs and mainstem, 29 in small creek, 120 in mainstem. Additional 10 dead. 20% fish spawning. Most dark and holding in pools.
Salt Creek												
259-233	9-12	Brennan	g	g	f	0	0	500	1800	-	-	1020 hrs.
Peat Beach Creek												
259-235	8- 4	Brennan	g	g	g	0	0	0	0	19000P	2500P	1655 hrs. Tide high.
259-235	8-26	Brennan	f	g	g	0	0	3700	0	13000P	-	1130 hrs. Plus 900 carcasses.
Sid Olds												
259-242	7-27	Brennan	f	g	g	0	0	34400	700	4200P	12000P 2000Ch	1740 hrs. Tide flooding. Poor survey conditions for upper end - estimate of 19,200 pinks very low, 15,200 pinks below upper cabin, chums lower.
259-242	8-30	Brennan	f	f	f	0	0	46000	0	7000P	-	1730 hrs. Plus 2,000 carcasses.

-Continued-

Stream	Date MM-DD	Observer	Visibility			-----Fish in Stream-----				Build Up Fish		Observer Remarks
			Str	Mou	Bay	Reds	Coho	Pink	Chum	Mouth	Bay	
259-242	9-13	Malloy	E	F	F	0	800	14500	1400	300Co	-	Water flow excellent. Heavy carcass accumulation on stream banks and lower pools. Pink distribution heaviest in index area; chum from lowest index riffle down; coho from bridge to just above fence. Surveyed mainstem 10/27, 348 live coho, 5 dead. Majority in deep holes. Fish dark, less than expected for this date. Poor visibility in few holes. Surveyed tributaries 10/28. 395 live coho, 5 dead. Majority in tributary #6, 80% paired and spawning. Additional 26 mortalities.
259-242	10-28	Holmes	e			6	743	0	0	-	-	
Kalsin Creek 259-243	8- 4	Brennan	e	e	e	0	0	47700	1400	2500P	31200P	1720 hrs. Tide high.
Frank's Creek 259-244	7-27	Brennan		g	g	0	0	0	0	-	5500P	1750 hrs. Tide flooding. No stream survey. Fish in ball in rocks by point.
259-244	8- 4	Brennan		e	e	0	0	0	0	12600P	-	1730 hrs. Tide high. No stream survey.
Myrtle Creek 259-245	8- 4	Brennan	e	e	e	0	0	10200	0	15500P	-	1735 hrs. Tide high.
Mayflower Beach 259-246	8- 4	Brennan	e	e	e	0	0	0	0	300P	-	1715 hrs. Tide high.
Roslyn Creek 259-251	8-30	Brennan	g	f	f	0	0	39400	200	-	-	1700 hrs.
259-251	9-16	Holmes	g			0	222	0	0	-	-	Foot Survey. 125 coho in two schools from tide water to campgrounds, 97 coho from campgrounds to bridge. No count above bridge. Coho very bright for this date... late entry into stream?
259-251	10-25	Gretsch	e			0	235	0	0	-	-	Additional 1 dead coho. Majority of fish in beaver pond and a few holes upstream. Fish not spawning, yet dark and holding. On 10/28 fish were observed moving upstream to spawning grounds.
Barabara Creek 259-363	9-13	Brennan	f	f	f	0	0	0	0	700Co	-	1530 hrs.
Goat Creek 259-364	7-31	Brennan		g	g	0	0	0	0	-	4500P	1705 hrs. Tide falling. Small balls of fish moving along beach. No stream survey.

-Continued-

Stream	Date MM-DD	Observer	Visibility			-----Fish in Stream-----				Build Up Fish		Observer Remarks
			Str	Mou	Bay	Reds	Coho	Pink	Chum	Mouth	Bay	
Kizhuyak River												
259-365	6-15	Brennan	g	g		0	0	0	0	-	-	1340 Hrs. No stream survey.
259-365	7- 5	Brennan	f	p		0	0	0	0	-	7500Ch	1020 Hrs. Rough estimate of fish jumping in middle. No stream survey.
259-365	7-11	Malloy	e	e	e	0	0	0	0	100Ch	-	Good water flow; looked at lower end of both forks and mainstream and chum sloughs. Bay visibility excellent.
259-365	7-19	Blackett	f	f		0	0	2500	0	-	-	Surveyed tributary and main channels from tidal flats to 1.5 miles upstream (just beyond stream guage). Low tide. No chum salmon. No pinks in tributary. 2,500 pinks in braided channels of main river from 0.5 miles to 1.25 miles upstrem of the lower tidal flats. A few pinks (20-30) were above the Watchout Creek tributary. Scattered schools of 100-200 pinks in the bay off stream mouth.
259-365	7-31	Brennan	g	g	g	0	0	14400	2000	16000P	52000P	1642 hrs. Tide falling.
259-365	8-23	Blackett	g	f	p	0	0	236000	3600	-	-	Intertidal, delta channels, to Watchout Creek (1.5 miles) 128,000 pink and 2,000 chum. Chum Channel (0.5 miles) 8,000 pink and 1,500 chum. Spring Creek (0.6 miles) 8,000 pinks. Watchout Creek (1.0 mile) 35,000 pinks. To Hydro Tailrace (2.25 Mile) 55,000 pink and 100 chum. Hydro Tailrace (0.2 miles) 1,000 pinks (3 chinook reported by residents). To Falls Creek (0.9 miles) 1,000 pinks. River above tailrace was nearly dry in places. An unknown number of salmon jumping in the bay. Estimating 5,000 pink carcasses. Massive schools of pinks in river make estimation of numbers difficult, plus chums difficult to distinguish (there were probably more).
259-365	8-30	Brennan	f	f	p	0	0	70000	14000	28000P	-	1550 hrs. Plus 12,000 carcasses.
259-365	9-11	Blackett	g	g	g	0	200	123000	8200	-	-	Intertidal, delta channels, to Watchout Creek (1.5 miles) 80,000 pink and 4,000 chum. Chum Channel (0.5 miles) 25,000 pink and 1,200 chum. Spring Creek (0.6 miles) 8,000 pink and 1,500 chum. Watchout Creek (1.0 mile) 8,000 pink, 500 chum, and 200 coho. To Hydro Tailrace (2.25 miles) 2,000 pink and 1,000 chum. Hydro Tailrace and to Falls Creek (0.9 miles) 0 salmon. Substantial sedimentation from powerhouse to Watchout Creek. No new fish seen in bay. Many carcasses in bay and in piles in delta areas. Some massive schools of pink salmon make estimation of numbers difficult, plus difficult to distinguish chum salmon (there may have been more).

-Continued-

Stream	Date MM-DD	Observer	Visibility			-----Fish in Stream-----				Build Up Fish		Observer Remarks
			Str	Mou	Bay	Reds	Coho	Pink	Chum	Mouth	Bay	
259-365	9-13	Brennan	f	f	f	0	0	34500	55500	-	-	1535 hrs. Fish predominantly in sloughs and lower 1/2 mile of river. Plus 40,000 carcasses in sloughs; 32,000 carcasses in river; and 45,000 carcasses in bay.
259-365	9-21	Blackett	g	g	f	0	600	84000	1700	-	-	Intertidal, delta channels, to Watchout Creek (1.5 miles) 49,000 pink, 200 chum, 100 coho. There were only a few hundred pink salmon left in the mainstem; the greatest number (35,000) were in a spring source creek (slough) at the southeast end of the bay that drains through the delta. Chum Channel (0.5 miles) 15,000 pink and 500 chum. Spring Creek (0.6 miles) 20,000 pink and 1,000 chum. Watchout Creek (1.0 miles) 500 coho. Watchout Creek to Hydro Tailrace (2.25 miles) to Falls Creek (0.9 miles) 0 salmon. Carcasses of pink and chum in the intertidal area estimated at 2 to 3 times the live count. Spawning of pink and chum anticipated to be finished by October 5.
Pestchanie Creek												
259-366	7-11	Malloy		e	e	0	0	0	0	-	-	No stream survey. Glanced at lower end - nothing. Bay visibility excellent.
259-366	8-30	Brennan	f	f	p	0	0	8700	0	8000P	-	1605 hrs. Plus 1,700 carcasses.
Few Creek												
259-367	7-31	Brennan		g	g	0	0	0	0	250R 13000P 4000Ch	4000P	1658 hrs. Tide falling. Fish on point and milling near KEA dock. Large school of chums right at dock. No stream survey.
Dovolno Creek												
259-368	7-11	Malloy		f	e	e	0	0	0	-	-	No stream survey. Bay visibility excellent.
259-368	8-30	Brennan	f	f	p	0	0	7000	0	12000P	15000P	1545 hrs. Plus 1,000 carcasses.
More Creek												
259-369	7-11	Malloy		f	f	0	0	0	0	4300Ch	-	No stream survey.
Sheratin River												
259-371	6-17	Brennan	f	f	f	0	0	0	0	-	-	1440 Hrs.
259-371	7- 5	Brennan	f	f	f	0	0	0	0	-	1500Ch	1010 Hrs. Suspected chums mixed in with forage fish.
259-371	7-11	Malloy	e	e	e	0	0	0	0	-	-	Stream blank. Some dollies in lower pool.

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Stream	Date MM-DD	Observer	Visibility			-----Fish in Stream-----				Build Up Fish		Observer Remarks
			Str	Mou	Bay	Reds	Coho	Pink	Chum	Mouth	Bay	
259-371	7-16	Brennan	g	g	g	0	0	500	140	4000P 2000Ch	4000P 12000Ch	1330 Hrs. Most of stream pinks in lower end. Chums all along east side, half of pinks in bay out by side creek on east side.
259-371	7-26	Malloy	g	g	f	0	0	10600	900	12000P	96000P 24000Ch	Some glare. Fish heavily schooled on east shore. Chums and pinks mixed. West shore visibility poor. Stream flow fairly good.
259-371	7-31	Brennan	g	g	g	0	0	18200	650	27000P 4000Ch	-	1720 hrs. - Tide falling. 14,800 pinks in main stream, 3,400 in sloughs.
259-371	8- 4	Prokopowich	e	e	e	0	0	39000	0	67000P	10000P	Looks very good.
259-371	8-19	Brennan	p	p	f	0	0	6700	0	-	-	1315 hrs. Plus an estimated 9000 carcasses. Fish not above braids...looks like water intermittent. Poor visibility.
259-371	8-30	Brennan	f	f	f	0	0	36500	5400	-	-	1612 hrs. Plus 19,400 carcasses.
259-371	9-13	Brennan	f	f	f	0	0	22000	45000	-	-	1600 hrs.
Horse Creek												
259-372	7-11	Malloy		e	e	0	0	0	0	-	-	No stream survey. Excellent bay visibility.
259-372	7-16	Brennan	g	g	g	0	0	0	0	200P	-	1335 Hrs.
259-372	7-26	Malloy	g	g	p	0	0	0	0	-	-	Stream flow o.k.
259-372	9-13	Brennan	f	f	f	0	0	4500	0	-	-	1600 hrs.
New Creek												
259-373	7-26	Malloy	g	e	e	0	0	0	0	-	100P	Small schools on beach.
259-373	7-31	Brennan	f	f		0	0	1800	0	-	-	1715 hrs. Tide falling. Fish jammed up into lower portion of creek.
Corral Creek												
259-381	7-11	Malloy	f	f	p	0	0	0	0	-	-	Glare in bay.
259-381	7-26	Malloy	e	f	g	0	0	0	0	-	-	Stream flow becoming poor. Bay looks non-fishy.
Red Cloud Creek												
259-382	7-11	Malloy	f	f	p	0	0	0	0	-	-	Glare in bay.
259-382	7-26	Malloy	e	f	g	0	0	0	0	-	-	Stream flow becoming poor; becoming intergravel near bridge.
259-382	8-30	Brennan	f	f	f	0	0	54000	6000	-	-	1620 hrs. Plus 15,000 carcasses.
259-383	7-26	Malloy	e	f	g	0	0	0	0	-	-	Should have seen chum build-up.
Soldier's Bay												
259-391	8-30	Brennan	f	f	f	0	0	5400	0	-	-	1625 hrs. Plus 10,000 carcasses.
259-391	9-13	Brennan	f	f	f	0	0	500	0	-	-	1240 hrs. Plus 4,300 carcasses in stream and 5,000+ in bay.

-Continued-

Stream	Date MM-DD	Observer	Visibility			-----Fish in Stream-----				Build Up Fish		Observer Remarks
			Str	Mou	Bay	Reds	Coho	Pink	Chum	Mouth	Bay	
Unnamed 259-392	8-30	Brennan	f	f	f	0	0	4000	0	-	-	1630 hrs. Plus 1,500 carcasses.
Unnamed 259-394	9-13	Brennan	f	f	f	0	0	300	0	-	-	1245 hrs. Plus 2,900 carcasses in stream and 3,000 carcasses in bay.
Monks Lagoon 259-395	9- 2	Sampson	e			0	142	286	0	-	-	Foot survey. Good water level. 37 pink carcasses in stream. Pinks spread out evenly...no apparent overcrowding. Majority of coho in lower river. Good holding pools and spawning habitat along creek. 3 beaver dams but fish seem to be getting over.
Soldier's Bay 259-397	9-13	Brennan	f	f	f	0	0	300	0	-	-	1238 hrs. Plus 1,200 carcasses.
259-398A	9- 2	Sampson	p	p		0	0	36	0	12P	-	Foot survey. 19 pink carcasses in stream. Majority of pinks in first 150 yards of creek. Old beaver pond at head. Creek very thick with alders.
259-398B	9- 2	Sampson	f	f		0	0	5	0	24P	-	Total length of creek only 200 yards.
Knee Bay Creek 259-399	9- 2	Sampson	g	g		0	0	3	0	9P	-	Very small creek with only 10 - 15 yards of available spawning habitat.
Sacramento River 259-401	9-12	Brennan	f	f	f	0	0	3600	0	-	-	1450 hrs.
Valley Creek 259-403	9-12	Brennan	f	f	f	0	0	100	0	-	-	1445 hrs.
Pasagshak River 259-411	9-12	Brennan	f	f	f	7200	800	500	0	-	-	1430 hrs. 50 kings. Limited lake survey of reds/kings. Did not survey upper reaches. Poor survey.
259-411	9-13	Malloy	F	F	P	14300	1800	2000	0	-	-	Reds primarily schooled in Lake Rosetead below culvert. Also numerous scattered schools spawning (1800 reds). Coho distribution from just above old bridge to above intertidal.

-Continued-

Stream	Date MM-DD	Observer	Visibility			-----Fish in Stream-----				Build Up Fish		Observer Remarks
			Str	Mou	Bay	Reds	Coho	Pink	Chum	Mouth	Bay	
Miam River												
259-412	7-27	Brennan	g	g	f	470	0	14900	0	1800P	5000P	1725 hrs. Tide flooding. Stream fish throughout west fork clear to head; only 200 in east fork to lake. 470 reds in lake.
259-412	9-11	Kaplan	f	f		0	0	40000	0	50P	-	Water high and swift due to rains. Heaviest concentrations of live pinks from 1/4 mile upstream from tide water to lake on east fork and to 1 mile upstream on west fork. Estimating 8-10,000 carcasses.
259-412	9-12	Brennan	g	g	f	950	0	45700	0	-	-	1425 hrs. Reds off tributary creek mouth in lake. Poor survey.
259-412	9-13	Malloy	G	G	F	0	1400	61000	0	-	-	Excellent show of pinks and coho. Mixed schools in lake near outlet. 58,000 pinks in lake fork, only 3,000 in other main fork. Heavy carcass accumulation in lower creek. Stream coho in lower pools, good school in lake.
Hurst Creek												
259-414	7-27	Brennan	g	g	f	0	0	1500	0	5000P	8500P	1715 hrs. Tide flooding. Up to 10,000 fish outside keying on this creek; 3,500 pinks along beach to east.
259-414	8- 4	Brennan	e	e	e	0	0	4400	0	9000P	-	1410 hrs. Tide flooding. Fish blocked upstream by beaver dam. For bay fish see Saltery Creek survey. Beaver dam lower end of creek.
259-414	8- 4	Prokopowich	e			0	0	33000	1000	-	-	Foot survey. No bay or mouth survey. Estimations were from stream ranging from lower stream reach to upper reach 4.5 miles from tide water. Fish were very bright; very low mortality count...estimate 40 morts. Highest concentrations of live fish were found from the tide water running consistent 3 miles upstream. Largest numbers were congregated in deep pools (usually 500+). This was the first system surveyed.
259-414	8-12	Kaplan	e			0	0	32000	0	-	-	
259-414	8-26	Brennan	g	f	p	0	0	96000	0	-	-	1151 hrs. Plus 3,000 carcasses - A lot of carcasses likely washed out in recent flood. 75% of fish below beaver dam (blocking passage).
259-414	9-12	Brennan	g	g	f	0	0	14000	0	-	-	1035 hrs. Plus 75,000 carcasses.
Saltery River												
259-415	6-17	Brennan	f	f		0	0	0	0	-	-	1130 Hrs. No steeam survey.
259-415	6-27	Prokopowich	f	f		0	0	0	0	400R	-	Blood red plankton/algae bloom in bay. No stream survey.

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Stream	Date MM-DD	Observer	Visibility			-----Fish in Stream-----				Build Up Fish		Observer Remarks
			Str	Mou	Bay	Reds	Coho	Pink	Chum	Mouth	Bay	
259-415	7-21	Brennan	f	f	f	0	0	0	0	8000P	3000P	1735 hrs. Very quick look at mouth of creek. 1710 hrs. Tide flooding. Fish in lagoon by boom and along shoreline; bay fish spread from mouth to west. No stream survey.
259-415	7-27	Brennan		g	f	0	0	0	0	14000P	47000P	
259-415	8- 4	Prokopowich	e	e		0	0	81000	0	60000P	-	Did not survey bay. 1355 hrs. Tide flooding. 63,000 pinks main channel, 12,100 pinks in lagoon to boom, 29,000 fish on flats by mouth. 52,000 pinks in solid bands from Hurst Creek to outside point, and 20,000 plus very bright fish just offshore in kelp. Bound for Saltery? Hurst??
259-415	8- 4	Brennan	e	e	e	0	0	75100	0	29000P	72000P	
259-415	8-26	Brennan	g	f	p	0	0	65000	0	-	-	1200 hrs. Plus 17,000 carcasses - most of carcasses likely washed out in recent floods.
259-415	8-30	Hastings	g			0	0	50000	0	-	-	Past peak spawning but 50,000 pinks still actively spawning between weir and lagoon.
259-415	9-12	Brennan	g	g	f	0	0	71000	15000	-	-	1045 hrs. No fish visible at mouth, none outside. Pink count from lagoon down. Too murky in lagoon, 40,000 plus pinks right above weir. Plus 100,000 carcasses.
259-415	9-25	Weir Count	f			30237	5332	214541	14	-	-	Weir in operation 6/10 through 9/25. Plus 1 king. Counts do not include estimates of fish below the weir.
259-415	9-25	Malloy	g	g	f	0	3500	11000	1800	200Co	-	Heavy carcass build-up in lagoon. Peak spawning period long past in index sampling area. Chums primarily in sloughs (1,100 out of 1,800); spawning past peak. Coho in upper portion of lagoon and in deepest holes of river.
Rough Creek												
259-416	8- 4	Brennan	e	e	e	0	0	1000	4500	710Ch	-	1340 hrs. Tide flooding.
259-416	8- 4	Prokopowich	e			0	0	6500	4000	-	-	
Wild Creek												
259-417	8- 4	Brennan	e	e	e	0	0	0	0	-	-	1105 hrs. Tide low, beginning to flood.
259-417	9-12	Brennan	g	g	f	0	0	500	1200	-	-	1050 hrs. Fish predominantly in sloughs to west in stream mouth.
Short Slough Creek												
259-417A	8- 4	Brennan	e	e	e	0	0	0	40	15Ch	525Ch	1110 hrs; tide low, beginning to flood. Bay fish to east along beach.

-Continued-

Stream	Date MM-DD	Observer	Visibility			-----Fish in Stream-----				Build Up Fish		Observer Remarks
			Str	Mou	Bay	Reds	Coho	Pink	Chum	Mouth	Bay	
Hidden Basin 259-418	8- 4	Brennan	e	e	e	0	0	0	470	-	500Ch	1115 hrs. Tide low. Water in creek low, intermittent above.
259-418A	9-12	Brennan	g	g	f	0	0	900	3800	-	-	1055 hrs. 90% of chums in sloughs.
259-418B	9-12	Brennan	g	g	f	0	0	0	0	-	-	1100 hrs.
West Basin Creek 259-419	8- 4	Brennan	e	e	e	0	0	0	0	-	-	1125 hrs.
Glottof Creek 259-420	8- 4	Brennan	e	e	e	0	0	0	0	-	-	1120 hrs.
259-421	8- 4	Brennan		e	e	0	0	0	0	-	1100Ch	1130 hrs. Tide low, starting to flood. Chums along beach in front of LaRose's cabins, and to west.
Goat Lake Creek 259-422	8- 4	Brennan	e	e	e	0	0	20200	0	11500P	14000P 3000Ch	1135 hrs. Tide low, flooding. Fish in stream clear to lake and throughout "falls". 70% in lower 1/2 and in intertidal area. Bay fish on point to south.
259-422	9-12	Brennan	g	g	f	0	0	6000	0	-	-	1105 hrs. Plus 21,000 carcasses
Kiliuda Pass Creek 259-423	8- 4	Brennan	e	e	e	0	0	0	550	2100Ch	3500Ch	1140 hrs. Tide low, flooding.
259-423	9-12	Brennan	g	g	f	0	0	700	1900	-	-	1120 hrs. Plus 12,000 carcasses.
Eagle Harbor 259-424	7-27	Brennan	g	g	f	0	0	2500	800	3500P 500Ch	1200P 300Ch	1655 hrs. Tide flooding.
259-424	8- 4	Brennan	e	e	e	0	0	10100	1900	5800P	11100P 400Ch	1320 hrs. Tide flooding. 9,200 pinks in west fork; 900 pinks and 1,900 chums in left fork.
259-424	9-12	Brennan	f	f	f	0	0	46000	15000	-	-	1330 hrs. Very poor survey due to severe internal turbulence.
259-424	9-25	Malloy	g	g	f	0	6500	12000	8000	-	-	Pink peak spawning long past. A lot of carcasses in lagoon. Heavy chum spawning occurring; equal amount of carcasses to live chums. Coho build-up in mainstream excellent; huge schools in middle pool.

-Continued-

Appendix A.2. (page 57 of 69)

Stream	Date MM-DD	Observer	Visibility			-----Fish in Stream-----				Build Up Fish		Observer Remarks
			Str	Mou	Bay	Reds	Coho	Pink	Chum	Mouth	Bay	
Buck Creek												
259-425	8- 4	Brennan	e	e	e	0	0	100	0	2200P	500P	1315 hrs. Tide flooding.
259-425	9-12	Brennan	f	f	f	0	0	6300	0	-	-	1315 hrs.
Gull Point Creek												
259-426	8- 4	Brennan	e	g	g	0	0	800	0	1400P	-	1310 hrs. Tide flooding.
Delta Creek												
259-427	8- 4	Brennan	e	e	e	0	0	0	0	200P	-	1335 hrs. Tide flooding.
Gull Cape Lagoon												
259-428	8- 4	Brennan	g	f	p	0	0	0	0	700Ch	13500Ch	1300 hrs. Tide flooding. No fish in lagoon; chums lying in big schools off beach past kelp beds. Water very muddy.
259-428	9-12	Brennan	g	f	p	0	0	0	9100	-	-	1310 hrs. Main stem of creek w/intermittent flow. Fish all in sloughs. Unable to see in lagoon or outside; too turbid or murky.
259-428	9-13	Malloy	E	E	F	0	0	0	12000	-	-	Chums primarily in tributaries. Water flow in tributaries fairly good. No fish show in lagoon channel or off mouth. Spawning not quite at peak.
Douglas Creek												
262-101	7-30	Malloy	p	p	p	0	0	0	0	-	-	Extremely muddy - water level very high.
262-101	8-26	Malloy	p	p	p	0	0	100	0	-	-	Water flow excellent - turbidity bad; fish count low.
Clear Creek												
262-102	7-30	Malloy	e	p	p	0	0	50	0	-	-	Fish small, very bright; located in first big pool.
262-102	8-26	Malloy	g	f	p	0	0	12000	0	-	-	Water flow excellent. Excellent look at stream; some glare.
Monument Creek												
262-103	7-30	Malloy	p	p	p	0	0	0	0	-	-	Stream milky. Water very high.
262-103	8-26	Malloy	p	p	p	0	0	600	0	-	-	Water high; very turbid; fish count low.
Glacier Lake Creek												
262-104	8-26	Malloy	p	p	p	0	0	0	0	-	-	Water high; very turbid.
Calving Glacier Cr.												
262-105	7-30	Malloy	p	p	p	0	0	0	0	-	-	Streams milky. Water very high.
262-105	8-26	Malloy	p	p	p	0	0	0	0	-	-	Water high; very turbid.

-Continued-

Stream	Date MM-DD	Observer	Visibility			-----Fish in Stream-----				Build Up Fish		Observer Remarks
			Str	Mou	Bay	Reds	Coho	Pink	Chum	Mouth	Bay	
Triple Lakes Creek												
262-106	7-30	Malloy	e	f	p	0	0	0	0	-	-	Stream clear - no fish. Water very high. Water high and uncharacteristically turbid. No sign of fish.
262-106	8-26	Malloy	p	p	p	0	0	0	0	-	-	
Long Mud Creek												
262-107	7-30	Malloy	p	p	p	0	0	0	0	-	-	Water very muddy and high. Water flow very high - very muddy.
262-107	8-26	Malloy	p	p	p	0	0	0	0	-	-	
Productive Forks Cr.												
262-108	7-30	Malloy	e	p	p	0	0	0	0	-	-	Clear - no fish. Water flow excellent. Water clear. Count low because of brushy cover on fish streams.
262-108	8-26	Malloy	e	f	p	0	0	3600	4200	-	-	
Bluff Creek												
262-109	7-30	Malloy	f	p	p	0	0	0	0	-	-	Stream somewhat milky. Water very high. Water flow high - turbid with poor visibility except for lowest portion by bluff.
262-109	8-26	Malloy	f	p	p	0	0	0	1400	-	-	
Long Slough Creek												
262-110	7-30	Malloy	e	p	p	0	0	0	0	-	-	Stream clear - no fish. Water flow normal.
262-110	8-26	Malloy	g	p	p	0	0	0	0	-	-	
Parallel Mud Creek												
262-111	7-30	Malloy	p	p	p	0	0	0	0	-	-	Water very muddy. Water flow very high - very muddy.
262-111	8-26	Malloy	p	p	p	0	0	0	0	-	-	
Broad Valley Creek												
262-113	8-26	Malloy	f	f	p	0	0	3800	0	-	-	Water flow excellent - water turbid. Fish in lower portion of stream.
Swikshak River												
262-151	6-27	Brennan	g	f	p	180	0	0	0	50R	-	1545 Hrs. Fish showing at mouth, but water too murky.
262-151	8-26	Malloy	e	p	p	39000	0	0	0	-	-	Sockeye distribution excellent, from spawning on spawning grounds to small schools (50 - 100 fish) holding in lowest portion of clear fork.
Big River												
262-152	7-30	Malloy	p	p	p	0	0	0	11000	-	-	Water turbid and muddy. Fish observed on shoals of river bed in shallower water.

-Continued-

Stream	Date MM-DD	Observer	Visibility			-----Fish in Stream-----				Build Up Fish		Observer Remarks
			Str	Mou	Bay	Reds	Coho	Pink	Chum	Mouth	Bay	
262-152	8-26	Malloy	p	p	p	0	0	3000	15000	-	-	Water very high and muddy. Fish count only a partial, very conservative count. Stream has not been clear all season. Fish count should have been at least 3 times number counted based on historical spawner distribution for chums and at least 5 times for pinks based on their normal distribution.
Village Creek												
262-153	7-30	Malloy	p	p	p	0	0	0	0	-	-	Water muddy and high. Pinks distributed heaviest in headwaters; spawner density in upper spawning grounds good, but poor in lower spawning grounds. Chum lightly dispersed throughout system. Water flow excellent; turbid in lower portion.
262-153	8-26	Malloy	f	f	f	0	0	48000	8000	-	-	
Chiniak Lagoon												
262-154	7-30	Malloy	p	f	p	0	0	0	0	38000Ch	-	Lagoon water muddy; village beach very turbid. Fish at entrance to lagoon.
262-154	8-26	Malloy	g	p	p	0	0	0	11000	3000Ch	-	Fish heaviest in upper portion of lagoon. Fish count on outside conservative - water turbid.
Wolf Creek												
262-155	8-26	Malloy	g	f	p	0	0	800	0	-	-	Water flow excellent. Looked a lower open portion; upper 4/5 of stream brushy.
Ninagiak Creek												
262-201	6-27	Brennan	f	p	p	0	0	0	0	-	-	1600 Hrs.
262-201	7-30	Malloy	p	p	p	0	0	0	0	-	-	Water muddy and high.
262-201	8-26	Malloy	f	p	p	0	0	3000	8000	-	-	Water flow high - fairly clear. Fish count conservative; many side sloughs had fish - too brushy to count.
Hook Creek												
262-202	7-30	Malloy	p	p	p	0	0	0	0	-	-	Water muddy.
262-202	8-26	Malloy	p	p	p	0	0	0	1100	-	-	Water flow very high and very turbid. Fish count very conservative.
Serpent Creek												
262-203	7-30	Malloy	p	p	p	0	0	0	0	-	-	Water very muddy and high.
262-203	8-26	Malloy	p	p	p	0	0	0	8000	-	-	Water flow very high and extremely turbid. Fish count very conservative - should have seen 3 times number counted based on historical spawner distribution.

-Continued-

Stream	Date MM-DD	Observer	Visibility			-----Fish in Stream-----				Build Up Fish		Observer Remarks
			Str	Mou	Bay	Reds	Coho	Pink	Chum	Mouth	Bay	
Hallo Creek												
262-204	7-30	Malloy	p	p	p	0	0	0	0	-	-	Water very muddy and high.
262-204	8-26	Malloy	p	p	p	0	0	0	0	-	-	Water extremely high and turbid as usual.
Cape Chiniak Creek												
262-205	7-30	Malloy	p	p	p	0	0	0	0	-	-	Water muddy and high.
262-205	8-26	Malloy	g	p	p	0	0	42000	12000	-	-	Water flow and clarity excellent; some glare. Excellent spawner distribution and density; many fish spawning; very few carcasses. Spawning riffles full of fish and additional fish schooled in pools.
Ole's Creek												
262-206	8-26	Malloy	g	f	f	0	0	6000	2000	-	-	Water flow good; water clear - no glare.
Little Ninagiak												
262-207	8-26	Malloy	f	p	p	0	0	0	3400	-	-	Water flow good.
Yugnak Creek												
262-254	8-26	Malloy	f	f	f	0	0	100	0	-	-	Water flow o.k. - glare
Kukak River												
262-271	8-26	Malloy	e	p	p	0	0	2000	56000	2000Ch	-	Water flow excellent; minimal glare. Fish all in index fork, excellent distribution throughout length of stream. Fish lightly distributed on riffles and more heavily schooled in pools. Fish count at mouth, on flats conservative. No fish build-up in bay which is extremely muddy.
Kukak Valley Creek												
262-272	8-26	Malloy	p	p	p	0	0	0	0	-	-	Water flow very high; water very turbid.
Inside Creek												
262-273	8-26	Malloy	p	p	p	0	0	0	0	-	-	Water flow good - heavy glare.
Kafli Creek												
262-301	6-27	Brennan	f	f	f	4050	0	0	0	1200R	-	1630 Hrs. Reds mostly schooled up at base of stream to lake; some outside in lagoon.
262-301	8-26	Malloy	e	g	g	56000	0	0	0	-	-	Fish distribution: 29,000 off of tributary to Upper Lake; 11,000 in scattered schools on shoals of lower lake, and 16,000 heavily schooled in backwater build-up area of lower lake.

-Continued-

Stream	Date MM-DD	Observer	Visibility			-----Fish in Stream-----				Build Up Fish		Observer Remarks
			Str	Mou	Bay	Reds	Coho	Pink	Chum	Mouth	Bay	
Halferty Creek 262-351	8-26	Malloy	g	g	g	0	0	9000	0	-	-	Water flow excellent. Didn't see any reds, however didn't survey deeply into lake bowl.
Weiss Creek 262-352	8-26	Malloy	g	g	g	0	0	3800	0	-	-	Water flow excellent.
262-352	9- 1	Giegerich	f	f		0	0	500	0	-	-	Observed 500 pink salmon from stream terminus to 300 yards upstream. No fish observed upstream of that point.
Sandy Creek 262-401	8-26	Malloy	e	e	e	0	0	3800	0	-	-	Water flow good. Fish spread out on riffles - no carcasses.
Missak Creek 262-402	8-26	Malloy	e	e	e	0	0	19000	0	33000P	-	Water flow excellent. Fish distribution in creek excellent. Heavy bear activity on creek. Fish at creek mouth very dark - spawning grounds definitely will be saturated.
Kinak Creek 262-451	8-29	Prokopowich	e	e	e	0	0	37000	3000	1000P	4000P	Very few carcasses. Good distribution
262-451	9-12	Malloy	E	G	G	0	0	19200	1100	-	-	Light escapement. Distribution heavily favoring lower half of system; chum interspersed in middle portion. Water flow excellent and very clear.
Geographic Creek 262-501	8-29	Prokopowich	g	g	g	0	0	200000	0	10000P	-	20,000 fish in bay at two side creeks on west side.
262-501	9-12	Malloy	P	P	P	0	0	2500	0	-	-	Water flow high and muddy; intertidal area less turbid. Heavy carcass accumulation on flats. Bay very turbid.
Pothole Creek 262-502	8-29	Prokopowich	g			0	0	0	0	-	-	-
262-502	9-12	Malloy	P	P	P	0	0	0	0	-	-	Water flow high and muddy; bay very turbid
Giegerich Creek 262-503	9- 1	Giegerich	g	g		0	0	1000	0	-	-	1,000 pink salmon equally distributed along first 300 yards of creek. No fish observed upstream thereafter. Restricted by falls.

-Continued-

Stream	Date MM-DD	Observer	Visibility			-----Fish in Stream-----				Build Up Fish		Observer Remarks	
			Str	Mou	Bay	Reds	Coho	Pink	Chum	Mouth	Bay		
Ried Creek	262-504	8-29	Prokopowich	g	g		0	0	0	0	10000P	-	Fish schooled up at mouth of creeks.
Theis Creek	262-505	8-29	Prokopowich	g	g		0	0	0	0	10000P	-	Fish schooled up at mouth of creeks.
Dakavak	262-551	7-26	Malloy	e	e	e	0	0	0	0	200Ch	53000P	Stream flow o.k. Bay quiet. Bay fish schooled N.E. corner.
	262-551	8-29	Prokopowich	g	g		0	0	38000	5000	-	-	Muddy off mouth.
	262-551	9- 4	Hastings	f			0	0	0	150	-	-	Surveyed 1/2 mile upstream from tidewater. Only partial survey due to poor weather.
	262-551	9- 5	Hastings	g			0	0	831	0	-	-	Surveyed 1.5 miles upstream from tide water. No live pinks seen 1.5 miles from starting point. Estimated 271 carcasses.
	262-551	9-12	Malloy	G	F	F	0	0	8500	2500	-	-	Pinks in upper half of stream; chum in lower half. Water flow good. Not as many carcasses as expected.
Atmo Creek	262-552	7-26	Malloy	e	e	e	0	0	0	0	-	-	Stream flow o.k.
Katmai Creek	262-601	7-26	Malloy	p	p	p	0	0	0	0	-	-	Bay and stream very muddy - typical!
Alogogshak Creek	262-602	7-26	Malloy	f	p	p	0	0	0	0	-	-	Bay turbid.
	262-602	8-29	Prokopowich	p			0	0	0	0	-	-	No survey. Too muddy.
Clam Creek	262-603	7-26	Malloy	e	g	f	0	0	0	0	-	-	Bay turbid.
	262-603	8-29	Prokopowich	p			0	0	0	0	-	-	Too muddy to see fish.
Kashvik Creek	262-604	7-26	Malloy	e	g	f	0	0	31000	12000	-	8000P	Stream flow down but o.k. Fish schooled in deep pools distributed 1/2 way upstream. Bay turbid.
	262-604	8-29	Prokopowich	f	p	p	0	0	80000	0	-	-	Water murky.
Wreckage Creek	262-605	7-26	Malloy	e	e	f	0	0	0	0	-	-	Bay turbid. Stream flow o.k.
	262-605	8-29	Prokopowich	g	g		0	0	10000	0	-	-	-
Skimpy Creek	262-606	8-29	Prokopowich	g			0	0	20	0	-	-	-

-Continued-

Stream	Date MM-DD	Observer	Visibility			-----Fish in Stream-----				Build Up Fish		Observer Remarks
			Str	Mou	Bay	Reds	Coho	Pink	Chum	Mouth	Bay	
Big Alinchak												
262-651	7-26	Malloy	e	e	e	0	0	1600	0	21000P	261000P	Stream flow O.K. Stream flow excellent. Fish distribution in stream excellent - still room for more. Bay buildup incredible. West beaches have 330,000 pinks and east beaches 305,000 pinks. Total of 642,000 fish in bay.
262-651	8-13	Malloy	e	e	e	0	0	102000	0	15000P	525000P	
262-651	8-26	Prokopowich	f	f		0	0	225000	10000	150000P	-	Water murky - poor visibility off mouth. Bay murky off mouth. Much better visibility. New fish still coming into bay.
262-651	8-29	Prokopowich	e	f	p	0	0	445000	15000	-	-	
262-651	9-12	Malloy	P	P	P	0	0	0	0	-	-	Water very high and turbid; bay very turbid Overall, unsuitable habitat. No live pinks seen and only 10 carcasses found within 1/4 mile of outlet.
262-651	9-15	Hastings	g	g	g	0	0	0	0	-	-	
Little Alinchak												
262-652	7-26	Malloy	e	e	e	0	0	0	0	6000P	124000P	Stream flow medium low. Bay and adjacent beach build-ups excellent. Stream flow excellent. Escapement just beginning. Basin plugged with fish - 230,000. Total of 275,000 fish from basin to stream.
262-652	8-13	Malloy	e	e	e	0	0	25000	0	20000P	230000P	
262-652	8-26	Prokopowich	f	f		0	0	110000	0	150000P	-	Water in bay and creek murky. 18,000 carcasses in stream. Water very high and turbid; bay very turbid
262-652	8-29	Prokopowich	e	e	e	0	0	162000	0	200000P	163000P	
262-652	9-12	Malloy	P	P	P	0	0	0	0	-	-	
Moose Creek												
262-653	7-26	Malloy	e	e	e	0	0	0	0	8000P	148000P	Stream flow o.k. Beach build-up excellent. Stream flow excellent. Incredible return from large parent year escapement. Stream fish extend to extreme headwaters. Heavy buildup right in mouth. Bay fish separated into 210,000 along south beach and 140,000 along north beach. Beach fish dark. Total of 628,000 fish from outer cape and beaches to stream.
262-653	8-13	Malloy	e	e	e	0	0	48000	0	130000P	350000P	
262-653	8-26	Prokopowich	e	e	e	0	0	17000	0	10000P	30000P	Partial survey of lower end. Bay pinks along west beach. 100,000 carcasses in bay along beach.
262-653	8-29	Prokopowich	e	e	e	0	0	230000	0	-	-	
262-653	9-12	Malloy	P	P	P	0	0	0	0	-	-	Water very high and turbid; bay very turbid
Bear Bay Creek												
262-654	7-26	Malloy	e	g	f	0	0	0	0	-	32000P	Stream flow o.k. Very muddy - most of bay muddy. Right fork. 2800 chum carcasses in stream
262-654	8-26	Prokopowich	p	p	p	0	0	0	11500	-	5000Ch	
262-654	8-29	Prokopowich	g	g		0	0	0	11400	-	-	

-Continued-

Stream	Date MM-DD	Observer	Visibility			-----Fish in Stream-----				Build Up Fish		Observer Remarks
			Str	Mou	Bay	Reds	Coho	Pink	Chum	Mouth	Bay	
Bear Lake Creek												
262-655	7-26	Malloy	e	e	e	0	0	0	0	-	3400P	Stream flow o.k.
262-655	8-26	Prokopowich	g			30	0	300	0	-	200Ch	-
West Bear Creek												
262-656	7-26	Malloy	e	g	f	0	0	0	0	-	31000P	Stream flow o.k.
262-656	8-26	Prokopowich	f			0	0	13500	0	-	-	Water murky.
262-656	8-29	Prokopowich	g	g	g	0	0	13600	0	-	500Co 3000Ch	Left fork. 3400 pink carcasses in stream.
Helen Creek												
262-701	7-26	Malloy	e	e	e	0	0	500	0	3000P	15000P	Water flow o.k. Bay buildup good for this date.
262-701	8-26	Prokopowich	e			0	0	44000	0	-	-	-
Portage Creek												
262-702	7-26	Malloy	e	e	e	0	0	1800	0	4000P	13000P	Water flow o.k. Bay build-up good for this date.
262-702	8-13	Malloy	e	e	e	0	0	38000	0	7000P	40000P	Stream flow excellent. Stream fish distributed into canyons of both forks. Lower stream light. Bay fish very bright. Mostly schooled along north beach.
262-702	8-26	Prokopowich	e	e		0	0	67000	0	15000P	-	-
262-702	9-15	Hastings	g			6	0	22	0	-	-	Overall a poor spawning area. Began survey 1/2 mile upstream from tide water. Estimating 15 carcasses. No fish seen above 1 1/4 mile up.
Teresa Creek												
262-703	7-26	Malloy	g	f	f	0	0	0	0	-	-	Good chum build-up along beach.
262-703	8-13	Malloy	g	g	g	0	0	800	3600	1000P	8000P	Stream flow excellent. Bay lightly turbid. Most fish very bright. Nice buildup of chums.
262-703	8-26	Prokopowich	f			0	0	42000	15000	1000Ch	35000Ch	No survey on S.F. Water muddy.
Trail Creek												
262-704	7-26	Malloy	g	f	f	0	0	0	0	-	-	Heavy chum build-up along beach.
262-704	8-13	Malloy				0	0	4800	2000	-	18000P	Stream flow excellent. Bay build-up greatest between 704 and 703 creeks. Most chums very bright.
262-704	8-26	Prokopowich	f			0	0	20000	20000	-	96000Ch	Water murky.
Katie Creek												
262-705	6-27	Malloy	g	g	p	0	0	0	0	-	-	Bay visible turb. Should be pinks build-up in bay.
262-705	7-26	Malloy	g	g	p	0	0	0	0	-	-	Bay turbid. Should be pink build up in bay.
262-705	8-13	Malloy				0	0	12000	0	15000P	40000P	Stream flow excellent. Stream going to be plugged.
262-705	8-26	Prokopowich	g			0	0	8000	0	-	-	-

-Continued-

Stream	Date MM-DD	Observer	Visibility			-----Fish in Stream-----				Build Up Fish		Observer Remarks
			Str	Mou	Bay	Reds	Coho	Pink	Chum	Mouth	Bay	
Puale Creek												
262-706	7-26	Malloy	f	f	f	0	0	0	0	-	-	Head of bay turbid.
262-706	8-26	Prokopowich	e			0	60	0	0	-	-	-
Oil Creek												
262-751	7-26	Malloy	e	e	e	0	0	1200	0	6000P	36000P	Excellent build-up on beach. Stream flow fair. Fish just beginning to enter stream; stream fish in lower 1/4 of stream.
262-751	8-13	Malloy				0	0	38000	0	18000P	15000P	Stream flow excellent. Stream fish distributed over 2/3 way to headwaters. Lagoon contains 40% of stream fish. Fish built up along east beach.
262-751	8-26	Prokopowich	e			0	0	73000	0	-	-	-
262-751	9-13	Hastings	f			0	0	240	0	-	-	Overall poor to marginal spawning habitat. Water very swift. No fish seen above 2 miles upstream from tide water. Estimating 390 carcasses.
Dry Bay												
262-752	7-26	Malloy	e	g	g	0	0	0	0	17000Ch	3000P 23000Ch	"Mouth" fish in deep channel by bluff - fish very bright! Outside beach has excellent "show". Stream flow good.
262-752	8-13	Malloy	e	g	g	0	0	1400	22600	180000Ch	-	Stream flow excellent. Stream fish favoring headwaters. "Mouth" fish all in lagoon channel mostly near bluffs. Fish extremely bright; very hard to see smaller schools. Incredible number of chums.
262-752	8-26	Prokopowich	f			0	0	10000	56000	-	-	Water was murky.
262-753	8-26	Prokopowich	g			0	0	3500	0	-	-	-
Jute Creek												
262-801	7-26	Malloy	e	e	e	0	0	0	0	-	200P	Stream flow moderately low. Bay build-up looks weak.
262-801	8-13	Malloy	e	e	g	0	0	0	0	-	3300Ch 32000P	Stream flow good. Bay fish very bright. Glare in bay.
262-801	8-26	Prokopowich	e	e		0	0	22000	0	30000P	-	-
262-801	9- 5	Hastings	f			0	0	0	0	-	-	Surveyed tributary to mainstem. No live pinks, 10 carcasses.
262-801	9-13	Hastings	f			0	0	900	0	-	-	Overall poor habitat; water very swift. Surveyed main stream starting 1/2 mile upstream from tide water. Estimating 6000 carcasses.

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Stream	Date MM-DD	Observer	Visibility			-----Fish in Stream-----				Build Up Fish		Observer Remarks
			Str	Mou	Bay	Reds	Coho	Pink	Chum	Mouth	Bay	
Kanatak												
262-802	7-26	Malloy	g	e	g	0	0	100	0	200P	34000P	Stream flow moderate. Fish just beginning to enter stream. Bay build-up very good for this date.
262-802	8-13	Malloy				0	0	76000	7600	200Ch	13000Ch	Stream flow very good. Fish beginning to move into lake. Stream heavy with fish. Chums favoring tributary to lake and upper portion of outlet.
262-802	8-26	Prokopowich	e			0	0	70000	0	8000P	24000P	-
262-802	9- 5	Hastings	g	g		0	0	36950	0	-	-	From lagoon to tide water 17,500 pinks and 600 carcasses. In main creek from lagoon to barrier falls below lake 15,000 pinks spread evenly over sections 7-1 plus 1500 carcasses. In side creek (Little Kanatak) 450 live plus 175 carcasses in first 1/4 mile, 4000 live and 1500 carcasses in second 1/4 mile, and 2500 above in steep canyon.
Salmon Creek												
262-803	7-26	Malloy	e	e	g	0	0	0	0	-	-	Stream flow low.
262-803	8-13	Malloy	e	e	e	0	0	0	0	-	11000P	Stream flow good. Fish very bright.
262-803	8-26	Prokopowich	e	e		0	0	500	0	1000P	-	-
Log Jam Creek												
262-804	8-13	Malloy	e	e	e	0	0	0	0	-	-	Stream flow good. Fish able to pass through log jam at this flow level.
262-804	8-26	Prokopowich	e	e		0	0	200	0	150P	-	-
262-805	8-13	Malloy	e	e	e	0	0	0	0	-	-	Stream flow excellent. Fish able to access lower portion of stream.
Little Big Creek												
262-850	8-13	Malloy	g	g	g	0	0	0	0	25000P	28000P	Stream flow excellent. Huge number of fish in vicinity of mouth - all fairly bright.
262-850	8-26	Prokopowich	e			0	0	5000	0	-	-	-
262-850	9-12	Malloy	P	P	P	0	0	0	0	-	-	Water very high and turbid; bay very turbid
Big Creek												
262-851	7-26	Malloy	e	e	e	0	0	24000	18000	7000P	294000P	New fish entering bay buildup area - numerous deep-balls of fish 1/4 mile off mouth, as well as "ribbons" of fish on either side of stream mouth. Stream fish schooled in pools distributed half way upstream.
										2000Ch		

-Continued-

Stream	Date MM-DD	Observer	Visibility			-----Fish in Stream-----				Build Up Fish		Observer Remarks
			Str	Mou	Bay	Reds	Coho	Pink	Chum	Mouth	Bay	
262-851	8-13	Malloy	e	e	e	0	0	685000	0	220000P	820000P	Incredible amount of fish. Did several surveys to double check counts-good index counts. Strings of fish still coming up from depths of bay along far east shore; balls of fish 1/4 mile offshore of mouth. Incredible sight! Stream fish extend to extreme headwaters; all sloughs and potholes plugged; all pools in stream plugged. Carcasses building in very lower reaches of stream. Fish massed in mouth of creek fanning out to beaches on either side of mouth. Of bay fish 280,000 massed along west beach between streams 850 and 851 and 540,000 massed along east beach from mouth out to north bay entrance. Fish on outer east beach extremely bright. Excellent visibility today. Stream flow in stream perfect. Total of 1.725 million fish counted - still new fish coming in.
262-851	8-26	Prokopowich	e	e		0	0	1320000	60000	300Co	-	Side slough 120,000 pinks (included in count). Near Pinks- 41,000 in mainstem, 18,000 in side slough; chum- 16,000 in mainstem, 8,000 in side slough. Uncountable number of carcasses. Live fish distributed entire length of stream. Water very high and turbid; alot of debris at inner mouth. Coho in first big hole. Bay very turbid
262-851	9-12	Malloy	F	P	P	0	50	59000	24000	-	-	
Des Moines Creek												
262-852	7-26	Malloy	e	e	e	0	0	700	0	400P	26000P	Good fish show along beach.
262-852	8-13	Malloy	e	g	g	0	0	91000	0	51000P	203000P	Stream flow excellent; clear. Heavy concentration of fish on beaches. Of 203,000 in bay 61,000 along west beach, 64,000 along east beach, additional 98,000 in bay near mouth. Fish at mouth still bright. Of stream fish 33,000 in east fork, 42,000 in west fork and 18,000 in mainstem. Incredible amount of fish.
262-852	8-26	Prokopowich	f			0	0	62000	0	-	-	
262-852	9-12	Malloy	P	P	P	0	0	0	0	-	-	Stream and bay very muddy from heavy rain; very high water and alot of debris in stream
Pass Creek												
262-853	7-26	Malloy	e	e	f	0	0	0	0	-	-	Wind chop in bay - water flow moderately low.
262-853	8-13	Malloy				0	0	66000	0	3000P	39000P	Stream flow excellent. Beaches full of fish - mostly very bright. Looks excellent.
262-853	8-26	Prokopowich	f			0	0	60000	0	-	-	Water murky.

-Continued-

Stream	Date MM-DD	Observer	Visibility			-----Fish in Stream-----				Build Up Fish		Observer Remarks
			Str	Mou	Bay	Reds	Coho	Pink	Chum	Mouth	Bay	
Short Creek												
262-854	7-26	Malloy	e	e	f	0	0	0	0	-	-	Wind chop in bay - water flow medium low.
262-854	8-13	Malloy				0	0	10000	0	8000P	64000P	Stream flow excellent. Beaches full of fish - balls of fish off mouth. Looks excellent.
262-854	8-26	Prokopowich	p			0	0	0	0	-	-	No estimate - Muddy water
Spit Creek												
262-856	8-13	Malloy	g	f	f	0	0	100	0	7000P	-	Bay lightly turbid.
Kialagvik Creek												
262-858	7-26	Malloy	g	f	p	0	0	600	1400	200P	-	Bay very turbid. No jumpers seen in bay. Stream weak for early chum.
262-858	8-13	Malloy	g	p	p	0	0	1900	0	200Ch	-	Bay turbid. Stream flow excellent. Expected to see more chums and pinks.
262-858	8-26	Prokopowich	g	p		0	0	0	15200	-	-	Main forks muddy. East Clear fork - 8,200 ch; West Clear fork - 7,000 ch. Poor visibility on flats.
Icy Peak Creek												
262-859	8-13	Malloy	f	f	p	0	0	0	0	-	-	Bay turbid - no jumpers. Expected to see more fish activity in salt water.
262-859	8-26	Prokopowich				0	0	0	0	-	-	No survey - turbulent
Slough Creek												
262-860	7-26	Malloy	e	g	f	0	0	0	0	-	-	Bay turbid/wind choppy. Stream flow low.
262-860	8-13	Malloy		g	f	0	0	0	0	-	-	No stream survey. Stream goes intergravel. No fish in salt water.
262-860	8-26	Prokopowich	f			0	0	0	0	-	-	Nothing seen. Windy.
Kayakliut Creek												
262-861	7-26	Malloy	e	e	e	0	0	0	0	-	4000P	Fish on east side in mouth along beach.
262-861	8-26	Prokopowich	e	e		0	0	9000	0	300P	-	-
Point Creek												
262-862	8-13	Malloy	e	g	f	0	0	0	0	7000P	-	Stream flow good. Conservative bay count; bay lightly turbid.
262-862	8-26	Prokopowich	e	e		0	0	200	0	-	-	-
Wind Shear Creek												
262-863	8-13	Malloy	g	g	f	0	0	0	0	-	-	South side of Wick Bay barren of fish.
Beach Creek												
262-864	8-13	Malloy				0	0	0	0	2000P	10000P	Stream flow excellent.

-Continued-

Stream	Date MM-DD	Observer	Visibility			-----Fish in Stream-----				Build Up Fish		Observer Remarks
			Str	Mou	Bay	Reds	Coho	Pink	Chum	Mouth	Bay	
Tiny Creek 262-865	8-13	Malloy				0	0	50	0	5000P	-	Stream flow good. Build-up on flats in mouth.
W. Coal Creek 262-866	8-13	Malloy	e	f	f	0	0	800	0	2000P	66000P	Stream flow excellent. Tremendous build-up along beach. Fish fairly bright.
262-866	9-12	Malloy	P	P	P	0	0	0	0	-	-	Water very high and turbid; bay very turbid
262-868	8-13	Malloy	g	g	g	0	0	100	0	3000P	29000P	Stream flow excellent. Big build-up along beach. Fish still pretty bright.
Imuya Creek 262-951	8-26	Prokopowich	f	f		0	0	24000	0	-	-	Water murky. No estimate off mouth.
Last Creek 262-952	8-26	Prokopowich	g	g		0	0	28000	0	5000P	-	-

Appendix A.3. Sockeye salmon peak escapement counts and total estimated escapement, where escapement is monitored by aerial and ground surveys, by stream, Kodiak Management Area, 1989.

District Stream	Number of Fish	
	Peak Count	Total Est. Escapement
Afognak District		
251 -101	2,600	5,200
251 -102	0	0
251 -103	1	2
251 -104	0	0
251 -105	1,600	3,200
251 -109	0	0
251 -201	0	0
251 -202	3	6
251 -206	0	0
251 -207	0	0
251 -301	0	0
251 -403	0	0
251 -405	0	0
251 -406	0	0
251 -407	0	0
251 -502	0	0
251 -503	0	0
251 -504	0	0
251 -505	0	0
251 -505	0	0
251 -506	0	0
251 -507	0	0
251 -510	0	0
251 -601	0	0
251 -811	0	0
251 -812	0	0
251 -813	0	0
251 -825	425	850
251 -826	0	0
251 -829	0	0
251 -832	0	0
251 -901	0	0
252 -103	0	0
252 -104	0	0
252 -301	0	0
252 -302	0	0
252 -303	0	0
252 -305	0	0

-Continued-

Appendix A.3. (page 2 of 9)

District Stream	Number of Fish	
	Peak Count	Total Est. Escapement
252 -306	0	0
252 -307	0	0
252 -308	0	0
252 -309	0	0
252 -317	0	0
252 -318	0	0
252 -319	0	0
252 -323	0	0
252 -324	0	0
252 -331	0	0
252 -331	0	0
252 -331	0	0
252 -332	0	0
252 -333	2	4
252 -335	0	0
252 -337	0	0
252 -338	0	0
252 -339	0	0
252 -343	0	0
252 -345	42	84
252 -902	0	0
subtotal	4,673	9,346

Northwest District		
253 -114	0	0
253 -115	14,700	29,400
253 -121	0	0
253 -122	38,000	76,000
253 -141	0	0
253 -142	0	0
253 -311	0	0
253 -313	0	0
253 -321	0	0
253 -331	0	0
253 -332	0	0
253 -333	0	0
254 -103	0	0
254 -105	0	0
254 -201	0	0
254 -202	0	0

-Continued-

Appendix A.3. (page 3 of 9)

District Stream	Number of Fish	
	Peak Count	Total Est. Escapement
254 -203	0	0
254 -204	0	0
254 -205	0	0
254 -206	0	0
254 -207	0	0
254 -208	0	0
254 -209	0	0
254 -210	0	0
254 -211	0	0
254 -212	0	0
254 -301	0	0
254 -302	0	0
254 -401	0	0
254 -402	0	0
254 -403	0	0
254 -404	0	0
254 -405	0	0
259 -363	0	0
259 -364	0	0
259 -365	0	0
259 -366	0	0
259 -367	0	0
259 -368	0	0
259 -369	0	0
259 -371	0	0
259 -372	0	0
259 -373	0	0
259 -381	0	0
259 -382	0	0
259 -383	0	0
259 -391	0	0
259 -392	0	0
259 -394	0	0
259 -395	0	0
259 -397	0	0
259 -398	0	0
259 -398	0	0
259 -399	0	0
subtotal	52,700	105,400

-Continued-

Appendix A.3. (page 4 of 9)

District Stream	Number of Fish	
	Peak Count	Total Est. Escapement
Southwest District		
255 -102	0	0
256 -101	0	0
256 -102	0	0
256 -202	0	0
256 -301	0	0
256 -302	0	0
256 -303	0	0
256 -303	0	0
256 -401	0	0
256 -402	0	0
subtotal	0	0

Alitak Bay District		
257 -101	0	0
257 -102	0	0
257 -301	0	0
257 -303	3,035	6,070
257 -305	0	0
257 -401	0	0
257 -402	4,000	8,000
257 -405	0	0
257 -502	0	0
257 -503	0	0
257 -504	0	0
257 -601	0	0
257 -602	0	0
257 -603	0	0
257 -604	0	0
257 -605	0	0
257 -701	0	0
257 -702	0	0
257 -702	0	0
257 -703	0	0
subtotal	7,035	14,070

-Continued-

District Stream	Number of Fish	
	Peak Count	Total Est. Escapement
Eastside District		
258 -101	0	0
258 -201	0	0
258 -202	0	0
258 -203	0	0
258 -204	0	0
258 -205	0	0
258 -206	0	0
258 -207	0	0
258 -208	0	0
258 -209	0	0
258 -210	0	0
258 -211	0	0
258 -212	0	0
258 -213	0	0
258 -301	0	0
258 -302	0	0
258 -303	0	0
258 -304	0	0
258 -305	0	0
258 -306	0	0
258 -307	0	0
258 -401	11,000	22,000
258 -511	0	0
258 -512	0	0
258 -513	0	0
258 -514	0	0
258 -521	0	0
258 -522	0	0
258 -524	0	0
258 -531	0	0
258 -532	0	0
258 -533	0	0
258 -541	100	200
258 -541	0	0
258 -542	0	0
258 -544	0	0
258 -551	10	20
258 -554	0	0
258 -555	0	0
258 -601	0	0
258 -602	0	0

-Continued-

Appendix A.3. (page 6 of 9)

District Stream	Number of Fish	
	Peak Count	Total Est. Escapement
258 -603	0	0
258 -701	0	0
258 -702	0	0
258 -703	0	0
258 -704	0	0
258 -705	0	0
258 -706	0	0
258 -707	0	0
258 -801	0	0
258 -803	0	0
258 -804	0	0
258 -805	0	0
258 -807	0	0
258 -808	0	0
258 -809	0	0
258 -810	0	0
258 -851	0	0
258 -852	0	0
258 -901	0	0
258 -902	0	0
258 -903	0	0
258 -904	0	0
259 -401	0	0
259 -403	0	0
259 -411	14,300	28,600
259 -412	950	1,900
259 -414	0	0
259 -416	0	0
259 -417	0	0
259 -418	0	0
259 -419	0	0
259 -420	0	0
259 -421	0	0
259 -422	0	0
259 -423	0	0
259 -424	0	0
259 -425	0	0
259 -426	0	0
259 -427	0	0
259 -428	0	0
subtotal	26,360	52,720

-Continued-

Appendix A.3. (page 7 of 9)

District Stream	Number of Fish	
	Peak Count	Total Est. Escapement
Northeast District		
259 -101	0	0
259 -102	0	0
259 -105	0	0
259 -221	0	0
259 -222	0	0
259 -223	0	0
259 -231	0	0
259 -233	0	0
259 -235	0	0
259 -242	6	12
259 -243	0	0
259 -244	0	0
259 -245	0	0
259 -246	0	0
259 -251	0	0
subtotal	6	12

Mainland District		
262 -101	0	0
262 -102	0	0
262 -103	0	0
262 -104	0	0
262 -105	0	0
262 -106	0	0
262 -107	0	0
262 -108	0	0
262 -109	0	0
262 -110	0	0
262 -111	0	0
262 -113	0	0
262 -151	39,000	78,000
262 -152	0	0
262 -153	0	0
262 -154	0	0
262 -155	0	0
262 -201	0	0
262 -202	0	0
262 -203	0	0
262 -204	0	0

-Continued-

Appendix A.3. (page 8 of 9)

District Stream	Number of Fish	
	Peak Count	Total Est. Escapement
262 -205	0	0
262 -206	0	0
262 -207	0	0
262 -254	0	0
262 -271	0	0
262 -272	0	0
262 -273	0	0
262 -301	56,000	112,000
262 -351	0	0
262 -352	0	0
262 -401	0	0
262 -402	0	0
262 -451	0	0
262 -501	0	0
262 -502	0	0
262 -503	0	0
262 -504	0	0
262 -505	0	0
262 -551	0	0
262 -552	0	0
262 -601	0	0
262 -602	0	0
262 -603	0	0
262 -604	0	0
262 -605	0	0
262 -606	0	0
262 -651	0	0
262 -652	0	0
262 -653	0	0
262 -654	0	0
262 -655	30	60
262 -656	0	0
262 -701	0	0
262 -702	6	12
262 -703	0	0
262 -704	0	0
262 -705	0	0
262 -706	0	0
262 -751	0	0
262 -752	0	0
262 -753	0	0
262 -801	0	0
262 -802	0	0

-Continued-

Appendix A.3. (page 9 of 9)

District Stream	Number of Fish	
	Peak Count	Total Est. Escapement
262 -803	0	0
262 -804	0	0
262 -805	0	0
262 -850	0	0
262 -851	0	0
262 -852	0	0
262 -853	0	0
262 -854	0	0
262 -856	0	0
262 -858	0	0
262 -859	0	0
262 -860	0	0
262 -861	0	0
262 -862	0	0
262 -863	0	0
262 -864	0	0
262 -865	0	0
262 -866	0	0
262 -868	0	0
262 -951	0	0
262 -952	0	0
subtotal	95,036	190,072
Total	185,810	371,620

Appendix A.4. Pink salmon peak escapement counts and total estimated escapement for streams with a peak count which is preceded and followed by at least one survey count, Kodiak Management Area, 1989.

District Stream	Number of Fish		
	Peak count (PC)	Total est. escapement (TEE)	TEE/PC
Afognak District			
251-105	1,200	4,022	3.35
252-332	30,000	39,207	1.31
252-343	10,000	20,794	2.08
subtotal	41,200	64,023	1.55

Northwest District			
253-114	2,500	3,707	1.48
253-115	84,000	193,167	2.30
253-122	520,000	795,899	1.53
253-331	367,000	410,913	1.12
254-202	300,000	645,157	2.15
254-203	165,000	251,953	1.53
254-204	34,000	63,820	1.88
254-301	95,000	103,983	1.09
259-365	236,000	432,100	1.83
subtotal	1,803,500	2,900,699	1.61

Southwest District			
256-401	1,250	1,692	1.35
subtotal	1,250	1,692	1.35

Alitak Bay District			
257-303	600	1,400	2.33
257-502	410,000	1,093,543	2.67
257-503	87,000	139,417	1.60
257-603	55,000	62,962	1.14
257-701	690,000	1,783,196	2.58
subtotal	1,242,600	3,080,518	2.48

-Continued-

Appendix A.4. (page 2 of 2)

District Stream	Peak count (PC)	Number of Fish	
		Total est. escapement (TEE)	TEE/PC
Eastside District			
258-207	60,500	69,762	1.15
258-211	400	647	1.62
258-521	15,000	42,437	2.83
258-522	53,300	147,423	2.77
258-541	30,500	57,133	1.87
258-542	78,000	118,323	1.52
258-544	17,000	19,257	1.13
258-602	50,400	81,256	1.61
258-701	450,000	1,192,683	2.65
259-414	96,000	142,535	1.48
259-424	46,000	103,478	2.25
subtotal	897,100	1,974,934	2.20

Northeast District			
259-101	8,000	11,519	1.44
259-102	42,100	42,950	1.02
259-231	152,000	365,383	2.40
259-242	46,000	139,668	3.04
subtotal	248,100	559,520	2.26

Mainland District			
262-551	38,000	65,910	1.73
262-705	12,000	19,867	1.66
262-751	73,000	115,612	1.58
262-801	22,000	23,303	1.06
262-802	76,000	158,350	2.08
262-851	1,320,000	2,078,433	1.57
262-852	91,000	110,580	1.22
282-853	66,000	124,200	1.88
262-858	1,900	2,489	1.31
subtotal	1,699,900	2,698,744	1.59

Total	5,933,650	11,280,130	1.90

Appendix A.5. Chum salmon peak escapement survey counts and total estimated escapements for streams with a peak count which is preceded and followed by at least one survey count, Kodiak Management Area, 1989.

District Stream	Number of Fish		TEE/PC
	Peak count (PC)	Total est. escapement (TEE)	
Afognak District			
252-332	500	500	1.00
subtotal	500	500	1.00

Northwest District			
253-121	7,000	7,000	1.00
253-122	53,000	67,827	1.28
253-331	23,000	34,039	1.48
254-202	57,600	57,600	1.00
254-203	50,000	50,000	1.00
254-204	1,000	1,467	1.47
254-301	80,000	116,792	1.46
254-302	1,500	1,500	1.00
254-401	32,000	32,000	1.00
259-365	55,500	55,500	1.00
subtotal	360,600	423,725	1.18

Southwest District			
256-401	5,000	6,506	1.30
256-402	2,050	3,067	1.50
subtotal	7,050	9,573	1.36

Alitak Bay District			
257-101	430	516	1.20
257-502	22,000	41,697	1.90
257-503	650	650	1.00
257-601	800	1,040	1.30
257-604	3,000	5,933	1.98
subtotal	26,880	49,836	1.85

-Continued-

District Stream	Number of Fish		TEE/PC
	Peak count (PC)	Total est. escapement (TEE)	
Eastside District			
258-204	16,700	24,870	1.49
258-205	1,725	1,725	1.00
258-207	34,000	49,639	1.46
258-521	2,300	3,233	1.41
258-522	10,000	10,000	1.00
258-542	10,000	10,000	1.00
258-602	15	18	1.20
259-414	1,000	1,000	1.00
259-415	15,000	15,000	1.00
259-424	15,000	30,345	2.02
subtotal	105,740	145,830	1.38

Northeast District			
259-242	1,400	3,879	2.77
subtotal	1,400	3,879	2.77

Mainland District			
262-551	5,000	7,368	1.47
262-651	15,000	15,333	1.02
262-802	7,600	7,853	1.03
262-851	60,000	94,200	1.57
subtotal	87,600	124,754	1.42

Totals	589,770	758,097	1.29

Appendix A.6. Pink salmon peak counts and total estimated escapement, where escapement is monitored by aerial and ground surveys, by stream in the Kodiak Management Area, 1989.

District Stream	Peak Count (PC)	Number of Fish		TEE/PC
		Total	Est. Escapement (TEE)	
Afognak District				
251-101	0		0	
251-102	409		778	1.90
251-103	4,000		7,604	1.90
251-104	300		570	1.90
251-105	1,200		4,022	3.35
251-109	500		951	1.90
251-201	774		1,471	1.90
251-202	651		1,238	1.90
251-206	9		17	1.90
251-207	200		380	1.90
251-301	0		0	
251-403	200		1,351	6.76
251-405	75		143	1.90
251-406	27,500		27,500	1.00
251-407	8,425		8,425	1.00
251-502	225		225	1.00
251-503	0		0	
251-504	615		615	1.00
251-505	325		325	1.00
251-505A	424		424	1.00
251-506	274		274	1.00
251-507	287		287	1.00
251-510	2,000		2,000	1.00
251-811	41		41	1.00
251-812	2		2	1.00
251-813	2,150		2,150	1.00
251-821	0		0	
251-826	0		0	
251-829	0		0	
251-832	75		143	1.90
251-901	1,500		6,000	4.00
252-103	1,150		2,186	1.90
252-104	325		618	1.90
252-301	1,500		1,500	1.00
252-302	50,000		95,052	1.90
252-303	0		0	
252-305	3,000		3,000	1.00

-Continued-

Appendix A.6. (page 2 of 9)

District Stream	Peak Count (PC)	Number of Fish	
		Total Est. Escapement (TEE)	TEE/PC
252-306	150,000	285,157	1.90
252-307	60,000	114,063	1.90
252-308	3	6	1.90
252-309	60,000	114,063	1.90
252-317	1	8	8.00
252-318	150,000	285,157	1.90
252-319	0	0	
252-323	150,000	285,157	1.90
252-331	2,356	2,356	1.00
252-331A	1,429	2,717	1.90
252-331B	1,156	2,198	1.90
252-332	30,000	39,207	1.31
252-333	15,000	28,516	1.90
252-335	189	359	1.90
252-337	3	6	2.00
252-338	2	4	1.90
252-339	7	13	1.90
252-343	10,000	20,794	2.08
subtotal	738,282	1,349,069	1.83

Northwest District			
253-114	2,500	3,707	1.48
253-115	84,000	193,167	2.30
253-121	8,000	13,600	1.70
253-122	520,000	795,899	1.53
253-141	1,800	3,422	1.90
253-142	900	4,400	4.89
253-311	1,500	2,852	1.90
253-313	12,000	12,000	1.00
253-321	6,000	11,406	1.90
253-331	367,000	410,913	1.12
253-332	325,000	353,333	1.09
253-333	800	2,740	3.43
254-103	2,000	3,802	1.90
254-105	1,400	1,400	1.00
254-201	60,000	60,000	1.00
254-202	300,000	645,157	2.15
254-203	165,000	251,953	1.53
254-204	34,000	63,820	1.88
254-205	500	1,500	3.00

-Continued-

Appendix A.6. (page 3 of 9)

District Stream	Number of Fish		
	Peak Count (PC)	Total Est. Escapement (TEE)	TEE/PC
254-206	1,000	1,000	1.00
254-207	1,000	2,200	2.20
254-208	1,000	2,000	2.00
254-209	1,500	1,500	1.00
254-210	1,500	1,500	1.00
254-211	5,000	5,000	1.00
254-212	2,500	2,500	1.00
254-301	95,000	103,983	1.09
254-302	3,000	3,000	1.00
254-401	48,000	91,250	1.90
254-402	2,500	4,753	1.90
254-403	100	190	1.90
254-404	1,500	4,833	3.22
254-405	400	1,920	4.80
259-363	0	0	
259-365	236,000	432,100	1.83
259-366	8,700	16,539	1.90
259-368	7,000	13,307	1.90
259-371	39,000	119,943	3.08
259-372	4,500	14,700	3.27
259-373	1,800	1,800	1.00
259-381	0	0	
259-382	54,000	126,000	2.33
259-383	0	0	
259-391	5,400	5,477	1.01
259-392	4,000	7,604	1.90
259-394	3,200	3,200	1.00
259-395	286	544	1.90
259-397	300	1,500	5.00
259-398A	36	68	1.90
259-398B	5	10	1.90
259-399	3	6	1.90
subtotal	2,420,630	3,803,498	1.57

Southwest District			
256-101	0	0	
256-102	0	0	
256-202	0	0	
256-301	1,500	2,852	1.90
256-302	0	0	

-Continued-

District Stream	Peak Count (PC)	Number of Fish		TEE/PC
		Total	Est. Escapement (TEE)	
256-303	0		0	
256-303A	0		0	
256-401	1,250		1,692	1.35
256-402	3,000		5,800	1.93
subtotal	5,750		10,344	1.80

Alitak Bay District				
257-101	0		0	
257-102	1,000		1,000	1.00
257-301	0		0	
257-303	600		1,400	2.33
257-401	550		2,097	3.81
257-402	300		570	1.90
257-405	6,000		6,000	1.00
257-502	410,000		1,093,543	2.67
257-503	87,000		139,417	1.60
257-504	32,000		67,133	2.10
257-601	12,000		24,800	2.07
257-602	35,000		72,333	2.07
257-603	55,000		62,962	1.14
257-604	123,000		212,733	1.73
257-605	7,000		14,260	2.04
257-701	690,000		1,783,196	2.58
257-702	94,000		103,400	1.10
257-702A	65,000		134,333	2.07
257-703	0		0	
subtotal	1,618,450		3,719,177	2.30

Eastside District				
258-101	2,600		12,880	4.95
258-201	4,700		28,420	6.05
258-202	200		271	1.36
258-203	150		150	1.00
258-204	200		227	1.14
258-205	300		340	1.13
258-206	4,100		7,653	1.87
258-207	60,500		69,762	1.15
258-208	900		1,647	1.83

-Continued-

Appendix A.6. (page 5 of 9)

District Stream	Peak Count (PC)	Number of Fish		TEE/PC
		Total	Est. Escapement (TEE)	
258-209	1,600	1,600		1.00
258-210	0	0		
258-211	400	647		1.62
258-212	4,000	10,800		2.70
258-213	28,500	43,700		1.53
258-301	2,800	2,800		1.00
258-302	3,500	3,500		1.00
258-303	2	6		3.00
258-304	3,000	10,247		3.42
258-305	575	1,648		2.87
258-306	150	430		2.87
258-307	1,100	3,520		3.20
258-401	0	0		
258-511	0	0		
258-512	11,000	11,000		1.00
258-513	0	0		
258-514	10,800	35,800		3.31
258-521	15,000	42,437		2.83
258-522	53,300	147,423		2.77
258-531	0	0		
258-532	0	0		
258-533	0	0		
258-541	30,500	57,133		1.87
258-541A	0	0		
258-542	78,000	118,323		1.52
258-544	17,000	19,257		1.13
258-551	2,600	10,450		4.02
258-554	1,000	1,533		1.53
258-555	300	620		2.07
258-601	4,000	8,267		2.07
258-602	50,400	81,256		1.61
258-603	42,000	81,200		1.93
258-701	450,000	1,192,683		2.65
258-702	68,000	146,467		2.15
258-703	47,000	65,033		1.38
258-704	0	0		
258-705	19,000	25,367		1.34
258-706	0	0		
258-707	100	190		1.90
258-801	0	0		
258-803	0	0		
258-804	0	0		

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Appendix A.6. (page 6 of 9)

District Stream	Peak Count (PC)	Number of Fish		TEE/PC
		Total	Est. Escapement (TEE)	
258-805	0	0	0	
258-807	0	0	0	
258-808	100	200		2.00
258-809	0	0		
258-810	0	0		
258-851	0	0		
258-852	100	100		1.00
258-901	1,800	3,720		2.07
258-902	17,000	35,133		2.07
258-903	3,000	3,000		1.00
258-904	2,000	2,000		1.00
259-401	3,600	6,844		1.90
259-403	100	190		1.90
259-411	2,000	3,802		1.90
259-412	61,000	196,087		3.21
259-414	96,000	142,535		1.48
259-415 ^a	81,000	251,741		3.11
259-416	6,500	12,357		1.90
259-417	500	1,300		2.60
259-417A	0	0		
259-418	0	0		
259-418A	900	1,711		1.90
259-418B	0	0		
259-419	0	0		
259-420	0	0		
259-421	0	0		
259-422	20,200	47,160		2.33
259-423	700	1,820		2.60
259-424	46,000	103,478		2.25
259-425	6,300	16,647		2.64
259-426	800	1,521		1.90
259-427	200	200		1.00
259-428	0	0		
subtotal	1,369,077	3,076,233		2.25

Northeast District				
259-101	8,000	11,519		1.44
259-102	42,100	42,950		1.02
259-105	4,000	7,298		1.82
259-221	22,000	41,823		1.90

-Continued-

Appendix A.6. (page 7 of 9)

District Stream	Peak Count (PC)	Number of Fish	
		Total Est. Escapement (TEE)	TEE/PC
259-222	36,500	108,498	2.97
259-223	113,000	329,627	2.92
259-231	152,000	365,383	2.40
259-233	500	951	1.90
259-235	3,700	5,427	1.47
259-242	46,000	139,668	3.04
259-243	47,700	90,680	1.90
259-244	12,600	12,600	1.00
259-245	10,200	19,391	1.90
259-246	300	300	1.00
259-251	39,400	74,901	1.90
subtotal	538,000	1,251,015	2.33

Mainland District			
262-101	100	190	1.90
262-102	12,000	21,693	1.81
262-103	600	1,141	1.90
262-104	0	0	
262-105	0	0	
262-106	0	0	
262-107	0	0	
262-108	3,600	6,480	1.80
262-109	0	0	
262-110	0	0	
262-111	0	0	
262-113	3,800	7,224	1.90
262-151	0	0	
262-152	15,000	28,516	1.90
262-153	48,000	91,250	1.90
262-154	0	0	
262-155	800	1,521	1.90
262-201	3,000	12,000	4.00
262-202	0	0	
262-203	0	0	
262-204	0	0	
262-205	42,000	79,844	1.90
262-206	6,000	11,406	1.90
262-207	0	0	
262-254	100	190	1.90
262-271	2,000	3,802	1.90

-Continued-

Appendix A.6. (page 8 of 9)

District Stream	Peak Count (PC)	Number of Fish		TEE/PC
		Total	Est. Escapement (TEE)	
262-272	0	0	0	
262-273	0	0	0	
262-301	0	0	0	
262-351	9,000	17,109		1.90
262-352	3,800	7,224		1.90
262-401	3,800	7,224		1.90
262-402	19,000	36,120		1.90
262-451	37,000	54,327		1.47
262-501	200,000	380,209		1.90
262-502	0	0		
262-503	1,000	1,901		1.90
262-504	10,000	10,000		1.00
262-505	10,000	10,000		1.00
262-551	38,000	65,910		1.73
262-552	0	0		
262-601	0	0		
262-602	0	0		
262-603	0	0		
262-604	80,000	282,600		3.53
262-605	10,000	22,667		2.27
262-606	20	38		1.90
262-651	445,000	541,827		1.22
262-652	162,000	201,400		1.24
262-653	230,000	230,000		1.00
262-654	0	0		
262-655	300	620		2.07
262-656	13,600	33,320		2.45
262-701	44,000	92,000		2.09
262-702	67,000	138,880		2.07
262-703	42,000	42,000		1.00
262-704	20,000	27,253		1.36
262-705	12,000	19,867		1.66
262-706	0	0		
262-751	73,000	115,612		1.58
262-752	10,000	11,560		1.16
262-753	3,500	6,654		1.90
262-801	22,000	23,303		1.06
262-802	76,000	158,350		2.08
262-803	500	500		1.00
262-804	200	200		1.00
262-850	5,000	5,000		1.00
262-851	1,320,000	2,078,433		1.57

-Continued-

Appendix A.6. (page 9 of 9)

District Stream	Number of Fish		TEE/PC
	Peak Count (PC)	Total Est. Escapement (TEE)	
262-852	91,000	110,580	1.22
262-853	66,000	124,200	1.88
262-854	10,000	12,000	1.20
262-856	100	190	1.90
262-858	1,900	2,489	1.31
262-859	0	0	
262-860	0	0	
262-861	9,000	18,600	2.07
262-862	200	200	1.00
262-863	0	0	
262-864	0	0	
262-865	50	95	1.90
262-866	800	1,521	1.90
262-868	100	190	1.90
262-951	24,000	45,625	1.90
262-952	28,000	53,229	1.90
subtotal	3,335,870	5,256,284	1.58
Total	10,026,059	18,465,619	1.84

^a Estimate reflects the number of pink salmon spawning downstream of the Sallery Creek weir.

Appendix A.7. Chum salmon peak counts and total estimated escapement, where escapement is monitored by aerial and ground surveys, by stream in the Kodiak Management Area, 1989.

District Stream	Number of Fish		TEE/PC
	Peak Count (PC)	Total Est. Escapement (TEE)	
Afognak District			
251-101	0	0	
251-102	0	0	
251-103	24	31	1.29
251-104	0	0	
251-105	0	0	
251-109	0	0	
251-201	0	0	
251-202	0	0	
251-206	0	0	
251-207	0	0	
251-301	0	0	
251-403	0	0	
251-405	0	0	
251-406	0	0	
251-407	0	0	
251-502	0	0	
251-503	0	0	
251-504	0	0	
251-505	0	0	
251-505A	0	0	
251-506	0	0	
251-507	0	0	
251-510	0	0	
251-601	0	0	
251-811	0	0	
251-812	0	0	
251-813	0	0	
251-821	0	0	
251-826	0	0	
251-829	0	0	
251-832	0	0	
251-901	0	0	
252-103	0	0	
252-104	0	0	
252-301	0	0	
252-302	0	0	
252-303	0	0	
252-305	0	0	

-Continued-

Appendix A.7. (page 2 of 9)

District Stream	Peak Count (PC)	Number of Fish	
		Total Est. Escapement (TEE)	TEE/PC
252-306	0	0	
252-307	0	0	
252-308	0	0	
252-309	0	0	
252-317	0	0	
252-318	0	0	
252-319	0	0	
252-323	0	0	
252-331	0	0	
252-331A	0	0	
252-331B	0	0	
252-332	500	500	1.00
252-333	0	0	
252-335	0	0	
252-337	0	0	
252-338	0	0	
252-339	0	0	
252-343	0	0	
subtotal	524	531	1.01

Northwest District			
253-114	0	0	
253-115	0	0	
253-121	7,000	7,000	1.00
253-122	53,000	67,827	1.28
253-141	0	0	
253-142	0	0	
253-311	0	0	
253-313	0	0	
253-321	0	0	
253-331	23,000	34,039	1.48
253-332	0	0	
253-333	0	0	
254-103	0	0	
254-105	0	0	
254-201	1,000	1,300	1.30
254-202	57,600	57,600	1.00
254-203	50,000	50,000	1.00
254-204	1,000	1,467	1.47
254-205	0	0	

-Continued-

Appendix A.7. (page 3 of 9)

District Stream	Peak Count (PC)	Number of Fish		TEE/PC
		Total	Est. Escapement (TEE)	
254-206	0		0	
254-207	0		0	
254-208	0		0	
254-209	0		0	
254-210	0		0	
254-211	0		0	
254-212	1,500		1,500	1.00
254-301	80,000		116,792	1.46
254-302	1,500		1,500	1.00
254-401	32,000		32,000	1.00
254-402	0		0	
254-403	0		0	
254-404	0		0	
254-405	0		0	
259-363	0		0	
259-365	55,500		55,500	1.00
259-366	0		0	
259-368	0		0	
259-371	45,000		57,830	1.29
259-372	0		0	
259-373	0		0	
259-381	0		0	
259-382	6,000		14,000	2.33
259-383	0		0	
259-391	0		0	
259-392	0		0	
259-394	0		0	
259-395	0		0	
259-397	0		0	
259-398A	0		0	
259-398B	0		0	
259-399	0		0	
subtotal	414,100		498,355	1.20

Southwest District				
256-101	100		253	2.53
256-102	0		0	
256-202	0		0	
256-301	0		0	
256-302	0		0	

-Continued-

Appendix A.7. (page 4 of 9)

District Stream	Number of Fish		TEE/PC
	Peak Count (PC)	Total Est. Escapement (TEE)	
256-303	0	0	
256-303A	0	0	
256-401	5,000	6,506	1.30
256-402	2,050	3,067	1.50
subtotal	7,150	9,826	1.37

Alitak Bay District			
257-101	430	516	1.20
257-102	500	1,167	2.33
257-301	0	0	
257-303	0	0	
257-401	25	32	1.29
257-402	0	0	
257-405	0	0	
257-502	22,000	41,697	1.90
257-503	650	650	1.00
257-504	0	0	
257-601	800	1,040	1.30
257-602	4,000	9,467	2.37
257-603	5,500	5,500	1.00
257-604	3,000	5,933	1.98
257-605	0	0	
257-701	0	0	
257-702	0	0	
257-702A	0	0	
257-703	0	0	
subtotal	36,905	66,002	1.79

Eastside District			
258-101	0	0	
258-201	5,300	13,780	2.60
258-202	3,600	9,360	2.60
258-203	0	0	
258-204	16,700	24,870	1.49
258-205	1,725	1,725	1.00
258-206	1,800	2,760	1.53
258-207	34,000	49,639	1.46
258-208	3,200	3,446	1.08

-Continued-

Appendix A.7. (page 5 of 9)

District Stream	Number of Fish		TEE/PC
	Peak Count (PC)	Total Est. Escapement (TEE)	
258-209	0	0	
258-210	0	0	
258-211	1,300	3,380	2.60
258-212	6,500	16,900	2.60
258-213	1,800	2,760	1.53
258-301	6,000	7,712	1.29
258-302	6,000	7,800	1.30
258-303	0	0	
258-304	0	0	
258-305	0	0	
258-306	0	0	
258-307	0	0	
258-401	0	0	
258-511	32,000	43,810	1.37
258-512	28,000	28,240	1.01
258-513	8,600	9,635	1.12
258-514	1,200	1,542	1.29
258-521	2,300	3,233	1.41
258-522	10,000	10,000	1.00
258-531	0	0	
258-532	0	0	
258-533	0	0	
258-541	0	0	
258-541A	0	0	
258-542	10,000	10,000	1.00
258-544	0	0	
258-551	0	0	
258-554	0	0	
258-555	0	0	
258-601	0	0	
258-602	15	18	1.20
258-603	20	31	2.00
258-701	0	0	
258-702	0	0	
258-703	0	0	
258-704	0	0	
258-705	0	0	
258-706	0	0	
258-707	200	257	1.29
258-801	1,200	1,542	1.29
258-803	0	0	
258-804	0	0	

-Continued-

Appendix A.7. (page 6 of 9)

District Stream	Peak Count (PC)	Number of Fish		TEE/PC
		Total	Est. Escapement (TEE)	
258-805	0	0	0	
258-807	900	1,157		1.29
258-808	400	514		1.29
258-809	0	0		
258-810	300	386		1.29
258-851	2,100	2,699		1.29
258-852	0	0		
258-901	0	0		
258-902	0	0		
258-903	0	0		
258-904	0	0		
259-401	0	0		
259-403	0	0		
259-411	0	0		
259-412	0	0		
259-414	1,000	1,000		1.00
259-415	15,000	15,000		1.00
259-416	4,000	5,142		1.29
259-417	1,200	3,120		2.60
259-417A	40	51		1.29
259-418	470	604		1.29
259-418A	3,800	4,885		1.29
259-418B	0	0		
259-419	0	0		
259-420	0	0		
259-421	0	0		
259-422	0	0		
259-423	1,900	6,920		3.64
259-424	15,000	33,078		2.21
259-425	0	0		
259-426	0	0		
259-427	0	0		
259-428	12,000	25,067		2.09
subtotal	239,570	352,064		1.47

Northeast District				
259-101	0	0		
259-102	0	0		
259-105	0	0		
259-221	0	0		

-Continued-

Appendix A.7. (page 7 of 9)

District Stream	Peak Count (PC)	Number of Fish		TEE/PC
		Total	Est. Escapement (TEE)	
259-222	1,800		2,314	1.29
259-223	0		0	
259-231	11,000		29,813	2.71
259-233	1,800		2,314	1.29
259-235	0		0	
259-242	1,400		3,897	2.78
259-243	1,400		1,800	1.29
259-244	0		0	
259-245	0		0	
259-246	0		0	
259-251	200		213	1.07
subtotal	17,600		40,350	2.29

Mainland District				
262-101	0		0	
262-102	0		0	
262-103	0		0	
262-104	0		0	
262-105	0		0	
262-106	0		0	
262-107	0		0	
262-108	4,200		7,560	1.80
262-109	1,400		2,520	1.80
262-110	0		0	
262-111	0		0	
262-113	0		0	
262-151	0		0	
262-152	45,000		57,844	1.29
262-153	8,000		10,283	1.29
262-154	11,000		14,140	1.29
262-155	0		0	
262-201	8,000		32,000	4.00
262-202	1,100		1,414	1.29
262-203	8,000		10,283	1.29
262-204	0		0	
262-205	12,000		15,425	1.29
262-206	2,000		2,571	1.29
262-207	3,400		4,370	1.29
262-254	0		0	
262-271	56,000		71,983	1.29

-Continued-

Appendix A.7. (page 8 of 9)

District Stream	Peak Count (PC)	Number of Fish		TEE/PC
		Total	Est. Escapement (TEE)	
262-272	0	0	0	
262-273	0	0	0	
262-301	0	0	0	
262-351	0	0	0	
262-352	0	0	0	
262-401	0	0	0	
262-402	0	0	0	
262-451	3,000	3,450		1.15
262-501	0	0		
262-502	0	0		
262-503	0	0		
262-504	0	0		
262-505	0	0		
262-551	5,000	7,368		1.47
262-552	0	0		
262-601	0	0		
262-602	0	0		
262-603	0	0		
262-604	12,000	19,600		1.63
262-605	0	0		
262-606	0	0		
262-651	15,000	15,333		1.02
262-652	0	0		
262-653	0	0		
262-654	11,400	25,840		2.27
262-655	0	0		
262-656	0	0		
262-701	0	0		
262-702	0	0		
262-703	15,000	20,440		1.36
262-704	20,000	21,467		1.07
262-705	0	0		
262-706	0	0		
262-751	0	0		
262-752	56,000	95,240		1.70
262-753	0	0		
262-801	0	0		
262-802	7,600	7,853		1.03
262-803	0	0		
262-804	0	0		
262-850	0	0		
262-851	60,000	94,200		1.57

-Continued-

Appendix A.7. (page 9 of 9)

District Stream	Peak Count (PC)	Number of Fish		TEE/PC
		Total	Est. Escapement (TEE)	
262-852	0	0	0	
282-853	0	0	0	
262-854	0	0	0	
262-856	0	0	0	
262-858	15,200	16,253		1.07
262-859	0	0	0	
262-860	0	0	0	
262-861	0	0	0	
262-862	0	0	0	
262-863	0	0	0	
262-864	0	0	0	
262-865	0	0	0	
262-866	0	0	0	
262-868	0	0	0	
262-951	0	0	0	
262-952	0	0	0	
subtotal	380,300	557,437		1.47
Total	1,096,149	1,524,565		1.39

Appendix B.1. Pink salmon odd year peak escapement counts by stream, Kodiak Management Area, 1969-1987^a.

Stream Name	Stream #	Year										Mean
		1969	1971	1973	1975	1977	1979	1981	1983	1985	1987	
Selief	251-101	0	3,200	200	0	0	5,000	450	600	1,200	7,500	1,815.0
Waskawareska	251-102	25	0		0	60	600		0			114.2
Muskomee	251-103	0	50			30	675		170	0	0	132.1
Dolphin	251-104		10			0			0		0	2.5
Malina	251-105	1,000	100	3,800	900	10,000	19,000	16,500	13,500	3,500	25,000	9,330.0
Bull Creek	251-106		0	0			0	0				0.0
	251-109											
Malka Bay	251-201	0	100		0	20	1,124	0	7,000	400		1,080.5
Marker	251-201A	0	0			0	87	0	400		0	69.6
Malina Bay	251-202	0	100	0		600	450		3,300	20		638.6
Cape Creek	251-203					1,200	600	7,500				3,100.0
Side Creek	251-204						68	0				34.0
	251-206											
	251-207											
Long Lagoon	251-301	1,600	7,200			0	8,000	28,300	1,500	7,599	5,500	7,462.4
Thorsheim	251-302	25	300	700	0	0	15,000	11,000	0	0	0	2,702.5
S. Paramanof	251-403	8,200	1,500	800	1,500	500	1,500	8,000	7,000	400	0	2,940.0
E Paramanof	251-404	2,900	1,300	3,000	200	1,300	13,000	26,000	13,000	9,900	6,500	7,710.0
NE Paramanof	251-405	0	0		0				0	10		2.0
Hidden Lake	251-406		0		0	0	15					3.8

-Continued-

Appendix B.1. (page 2 of 23)

Stream Name	Stream #	Year										Mean	
		1969	1971	1973	1975	1977	1979	1981	1983	1985	1987		
Chum Creek	251-407		0				3,499						1,749.5
Devil Inlet	251-501					0				0			0.0
SW Blue Fox	251-502					0	5						2.5
SE Blue Fox	251-503				0	0	0						0.0
SW Blue Fox	251-504				0	0	0						0.0
SE Red Fox	251-505				0	0	0						0.0
	251-505A												
	251-506												
	251-507												
	251-510												
Big Bay	251-601	0	0		0	0	0	0	0	0			0.0
Shangin	251-701	0	0			0		0	0	0			0.0
W Shangin	251-702	0	0			0	0	100	0	87			26.7
E Shangin Bay	251-703					0	0	0	0	0			0.0
	251-705												
	251-706									3			3.0
	251-811												
	251-812												
	251-813												
Big Waterfall	251-821	0			500	15		1,800	2,000	0	0		616.4

-Continued-

Appendix B.1. (page 3 of 23)

Stream Name	Stream #	Year										Mean
		1969	1971	1973	1975	1977	1979	1981	1983	1985	1987	
Ltl Waterfall	251-822 ^b							61,193	21,670	199,211	29,093	77,791.8
Delphin Island	251-823					0		0	0	0	0	0.0
Delphin Bay	251-824	0				0		0	0	0		0.0
Perenosa	251-830	25,000	25,000	11,000	21,000	21,600	71,000	56,000	18,000	33,145	12,094	29,383.9
Discovery Bay	251-826				0	10		73	0	0		16.6
Bear Creek	251-827					0	12	452	800	5,000	0	1,044.0
Pauls Lake	251-828	100			0	0	0	581		375		176.0
Elk Creek	251-829						0	1,205	0	0		301.3
Cabin Creek	251-825						0	138	0			46.0
Pauls Bay	251-831								533	26,904	202	9,213.0
	251-832											
Seal Bay	251-901	0	3,323		1,688	14,314	10,000	29,000	5,500	15,000		9,853.1
No name	251-901A						0					0.0
No name	251-902							500	0	3,000		1,166.7
South	251-903A								0		0	0.0
Long Tonki	252-101		300		90		300	4,400	0	9,000		2,348.3
Short Tonki	252-102		50		0	0	700	8,500	0	11,000		2,892.9
	252-103											
	252-104											
No name	252-301									10,000		10,000.0

-Continued-

Stream Name	Stream #	Year										Mean
		1969	1971	1973	1975	1977	1979	1981	1983	1985	1987	
No name	252-302								100		0	50.0
	252-303											
No name	252-305								85		0	42.5
Saposa	252-306								2,550	15,000	0	5,850.0
Ruth Bay	252-307								213	5,000	0	1,737.7
	252-308										0	0.0
N Izhut	252-309							6,000			800	3,400.0
NE Saposa	252-311	0			25			0	500			131.3
W Izhut	252-312	50			90	563	284	1,200				437.4
Silver Lady	252-314A					500						500.0
Humpy Cove	252-315	25			200		90	1,200				378.8
N Saposa	252-316	250	300		438	718	1,062					553.6
Ruth Bay	252-317	0			0	1,409	1,012	100			0	420.2
McDonald Lgn	252-318				0	208	4	0		0		42.4
Little Afognak	252-319	0			0	25	0		0		0	4.2
No Name	252-321	0			18		850	0				217.0
Little Kitoi	252-323					0	300		0	10,000	0	2,060.0
Big Kitoi	252-324		3,800		8,643	6,661	15,988	40,834	0	25,000	153,482	31,801.0
NE Danger	252-331	600		200	0	158	3,200	18,500	1,096	200	1,200	2,794.9
	252-331A											
	252-331B											

-Continued-

Stream Name	Stream #	Year										Mean
		1969	1971	1973	1975	1977	1979	1981	1983	1985	1987	
Big Danger	252-332	7,600	5,800	3,000	2,100	21,000	24,000	44,029	11,000	13,000	2,700	13,422.9
E Danger	252-333	0			127		512	0	0		900	256.5
NW Danger	252-335			100	0	0		0	0		0	16.7
	252-337											
	252-338											
	252-339											
Back Bay Creek	252-341	0			0	3	799	1,000	0			300.3
Afognak	252-342 ^c	48,000	13,600	38,000	2,800	84,000	19,020	17,508	84,956	8,860	8,780	32,552.4
Marka Creek	252-343	12,000	12,500	0	0	29,000	41,500	38,700	34,500	9,800	7,100	18,510.0
	252-345											
----- subtotal -----		107,375	78,533	60,800	40,319	193,894	259,256	431,263	229,473	422,614	260,851	299,248
Campbell Lagoon	253-114	100		0		0	4	250	50			67.3
Little River	253-115	0		2,000		11,500	36,000	82,000	32,000	18,300	41,000	27,850.0
Uganik S arm	253-121	500	1,500	1,000	0	50	1,600	6,000	1,600		16,000	3,138.9
E Uganik	253-122	50,000	37,000	53,000	77,500	44,000	99,000	75,000	128,000	114,000	190,000	86,750.0
NE Uganik	253-123	0				0		0	0			0.0
No name	253-141								50			50.0
	253-142											
No name	253-201										0	0.0

-Continued-

Stream Name	Stream #	Year										Mean	
		1969	1971	1973	1975	1977	1979	1981	1983	1985	1987		
No name	253-203											0	0.0
Faun Creek	253-311							100	350				225.0
No name	253-313								150	1,200	0		450.0
S Viekoda	253-321	1,500	2,500	3,000		325	4,800	11,700	1,400			2,600	3,478.1
E Viekoda	253-322				20	2	375	0	0				79.4
Coho Creek	253-323			0		362	60	0	0			0	70.3
Terror	253-331	46,000	40,000	22,000	43,500	56,000	80,000	92,000	42,250	80,000	72,000		57,375.0
Baumans	253-332	23,000	6,000	3,000	550	5,900	18,100	44,500	8,100	21,000	15,000		14,515.0
Clara's Creek	253-333					35	0	0	1,200	4,100	100		905.8
Dry Spruce	253-351	0					0		0				0.0
Dry Spruce	253-352	200					80		0				93.3
Cape Uyak	254-102			80		7,770	129		0				1,994.8
7 Mile Beach	254-103			0		300	1,800		190	80			474.0
Dora's Creek	254-104					12,075		600					6,337.5
	254-105							3,000	700	30			1,243.3
W Uyak	254-201	400		10	13,500	13,500	19,000	15,000	6,000	4,500	1,600		8,167.8
S Uyak	254-202	103,000	65,000	50,000	72,000	111,000	147,000	136,000	180,000	175,500	96,500		113,600.0
E Uyak	254-203	13,000	30,000	4,000	24,000	24,130	58,000	58,000	62,500	80,000	30,000		38,363.0
Browns Lagoon	254-204	2,600	400	800		4,500	5,200	32,000	4,500	7,100	11,000		7,566.7
Island Creek	254-205			0	1,200	1,950	400	0	0	0	0		443.8
Short Creek	254-206				500	1,350	300	0	0	0	0		307.1

-Continued-

Stream Name	Stream #	Year										Mean
		1969	1971	1973	1975	1977	1979	1981	1983	1985	1987	
Long Creek	254-207			0		8,500	1,500	0	0	40	300	1,477.1
Cabin Creek	254-208					1,480	350	300	60	30	500	453.3
Guen's Creek	254-209					640		0	0	0		160.0
Trap Creek	254-210					1,900		0	0	0		475.0
Marker	254-211					560		0	0			186.7
Ruins	254-212					390		0	600	2,300		822.5
No name	254-213								220	1,500		860.0
SE Zachar	254-301	18,000	14,000	11,000	35,500	35,500	43,000	50,000	30,000	4,000	30,000	27,100.0
NE Zachar	254-302	0		5,000	0	3,200	6,000	300	0		0	1,812.5
Spiridon	254-401	2,000	20,000	0		45,000	18,000	0	30,000	0	0	12,777.8
Clover Rock	254-402						400	100	40			180.0
Telrod Cove	254-403					400	150	50	20			155.0
Chief Cove	254-404							2,800	7,100	750	450	2,775.0
Cape Kuliuk	254-405							2,300	100			1,200.0
Karluk	255-101	0		57	210	52,319	82,973	51,248	38,902	41,232	24,222	32,351.4
Low Cape	256-101											
N Low Cape	256-102											
Red River	256-201	2,100	0	839	2,568	3,716	10,878	4,358	17,702	3,000	7,819	5,298.0
Old Red River	256-202			0	0	0	10		1,400			282.0
Carmel Creek	256-301			0	0	3,500	3,000	13,000	3,000	2,600	3,440	3,567.5
Halibut	256-302			0	0	0	0	50	800		0	121.4

-Continued-

Stream Name	Stream #	Year										Mean
		1969	1971	1973	1975	1977	1979	1981	1983	1985	1987	
Grants	256-303			0		0	0	0	1,100	10,500	0	1,657.1
	256-303A											
S Sturgeon	256-401	0	4,000	0	0	2,000	45,000	0	0	4,500	0	5,550.0
E Sturgeon	256-402		0		0	5,000	400		4,500	5,000		2,483.3
subtotal		262,400	220,400	155,786	271,048	458,854	683,509	680,656	604,584	581,262	542,531	475,292
Little Sukhoi	257-101		0			0	0		0		0	0.0
Big Sukhoi	257-102	0	0			0	0	0	0	0	0	0.0
Steep Cape	257-301	0					1,500	0	0			375.0
Akalura	257-302	14,000		742	9,494	13,380	100	0	9,000	2,500	22,791	8,000.8
Silver Salmon	257-303	0			0	2,500	0	0	600	0	0	387.5
Upper Station	257-304	35,000	15,000	2,197	22,000	18,000	5,277	1,506	424	5,235	1,010	10,564.9
Middle Creek	257-305								10			10.0
Narrows	257-401	6,000	5,000	1,000	200	2,500	3,830	16,000	3,000	8,000		5,058.9
Horse Marine	257-402	25	400	2,777	2,000	7,000	6,000	3,000	1,000	0	2,200	2,440.2
Dog Salmon	257-403	60,000	63,000	22,000	38,000	98,000	85,178	157,000	72,000	141,863	55,993	79,303.4
Ltl Dog Salmon	257-404	19,000	19,000	8,000	3,500		17,000	50	5,000			10,221.4
Chip Cove	257-405	5,000			4,500	4,000	2,400	4,000	4,500			4,066.7
Suug Cove	257-406					300		3,500	700			1,500.0
Akhiok	257-407					400		0	24			141.3
Prior Point	257-408								0			0.0
Kempf	257-409							0	0			0.0

-Continued-

Stream Name	Stream #	Year										Mean
		1969	1971	1973	1975	1977	1979	1981	1983	1985	1987	
Cape Hepburn	257-501			0	10	100			0	800		182.0
Deadman	257-502	140,000	100,000	40,000	76,700	141,000	97,500	180,000	148,000	166,500	130,700	122,040.0
Alpine Cove	257-503	15,000	4,000	500	340	8,000	7,000	13,000	8,200	9,000	6,100	7,114.0
Hellen Creek	257-504			0	0		3,500		2,000	350		1,170.0
Ivor Cove	257-505								0			0.0
NE Portage	257-601	1,500	0	450	0	2,800	4,500	50	2,000	40,000	0	5,130.0
NE Sulua	257-602	1,700	4,000	400	900	3,000	6,000	3,800	8,700	35,000	25,000	8,850.0
N Sulua	257-603	6,000	1,000	4,000	200	3,000	10,500	2,500	10,100	48,300	24,500	11,010.0
Tom Creek	257-604	2,000	400	1,000	2,400	4,500	6,000	800	15,500	58,000	0	9,060.0
E Portage	257-605	0	0	0	0	0		0	1,000	2,000		375.0
Humpy	257-701	44,000	122,000	45,000	71,300	92,000	306,000	240,000	142,000	273,000	208,500	154,380.0
Shag Bluff	257-702			500	4,200	10,500	900		1,600	8,000	0	3,671.4
	257-702A											
Seaborg	257-703	0			0	600	6,000		5,000	90	0	1,670.0
subtotal		349,225	333,800	128,566	235,744	411,580	569,185	625,206	440,358	798,638	476,794	446,723
Boulder Bay	258-101	1,100	200	0			6,300	9,000	200	1,100		2,557.1
Santa Flavia	258-201	2,000		0	0		3,500	2,000	800	5,200	100	1,700.0
Shearwater	258-202	15	100	250	0		1,000	0	20	70	400	206.1
Port Otter Cr	258-203	0	0		20		0	0	0	0	0	2.5
Dog Bay	258-204	0	200	0	100		0	1,000	200	0	0	166.7
Coxcomb Creek	258-205		0	300	0		0	0	0	100	3,300	462.5

-Continued-

Stream Name	Stream #	Year										Mean
		1969	1971	1973	1975	1977	1979	1981	1983	1985	1987	
N Kiliuda	258-206	2,500	3,000	700	200	1,350	4,400	9,000	6,000	13,400	6,080	4,663.0
W Kiliuda	258-207	500	2,500	1,500	3,700	2,700	22,200	47,000	8,800	12,600	11,180	11,268.0
Pass Creek	258-208			0	0	200	0	0	0	100	0	37.5
Deer Creek	258-209	1,000	50	500	0		1,200	3,100	2,500	1,200	100	1,072.2
Spit Creek	258-210	0	0	0	0		0	5,000	0		0	625.0
Marker Creek	258-211	0	1,000	10	0	400	0	0	0	50	0	146.0
Pivot Point	258-212	0		0	0	0	0	0	0	0	0	0.0
No name	258-213						150	0	0	0	0	30.0
Amee Bay	258-301	0				0	0	0	600	500		183.3
McCord Beach	258-302	0	200	10		2,600	0	0	300	400	0	390.0
Left Cape	258-303	0		0	0	0	0	0	0	0		0.0
Ghost Rocks	258-304	1,100		20		13,000	11,000	6,300	4,200	2,800	200	4,827.5
Nut Island	258-305	0		0	0	200	700	75	0	0		121.9
Bush Point	258-306	0	0	0	0	0	0	0	0			0.0
Fugitive	258-307						0	0	0	0	0	0.0
No name	258-309										0	0.0
No name	258-313										0	0.0
Ocean Beach	258-401	500	0	1,000	0	500	0	0	0	400	0	240.0
Wedge Creek	258-402					580	2,000		150	20		687.5
No name	258-403									800		800.0
Barns Creek	258-404									900	0	450.0

-Continued-

Appendix B.1. (page 11 of 23)

Stream Name	Stream #	Year										Mean
		1969	1971	1973	1975	1977	1979	1981	1983	1985	1987	
Rolling Bay	258-511	2,200	5,400	300	0	600	3,500	8,600	3,000	3,600	0	2,720.0
Natalia Bay	258-512	0		100		400	3,000	0	0	300	0	475.0
Newman Bay	258-513	0		50		2,760	0	0	100	700	0	451.3
Natalia Cabin	258-514							0	500	1,200	0	425.0
Dry Creek	258-515							8,000	0	0	0	2,000.0
Outside Creek	258-516									0	0	0.0
Midway Creek	258-521	1,900	1,900	5,000	13,500	28,000	6,000	22,000	22,000	15,000	3,400	11,870.0
Barling Creek	258-522	35,000	23,000	23,000	39,400	48,500	67,500	52,000	78,000	77,000	14,100	45,750.0
Old Harbor	258-523	1,500	0	0	0	30	100	0	700	50		264.4
	258-524											
W 3-Saints	258-531	0			0	60	0	5,000	400	1,100		937.1
SW 3-Saints	258-532	0			0	0	80	0	200	25		43.6
NE 3-Saints	258-533	0				0	0	0	25		0	4.2
Kaiugnak Point	258-541	4,000	3,000	150	250	7,000	13,000	11,000	6,000	3,200	500	4,810.0
	285-541A											
Kaiugnak Lagoon	258-542	25,000	1,500	1,100	1,600	13,000	17,000	22,000	23,100	21,000	11,000	13,630.0
Aunula Creek	258-543	0	0		0		0	4,000	0	10		572.9
Bruen	258-544						0	1,200	500	3,800	2,200	1,540.0
Kauignakik	258-545											
Kiavak Portage	258-551	7,000	0	3,000	0	400	500	34,000	2,000	1,800		5,411.1
Cape Kiavak	258-552	3,800		3,000		14,000	11,500	17,000	4,000	0	5,360	7,332.5

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Appendix B.1. (page 12 of 23)

Stream Name	Stream #	Year										Mean
		1969	1971	1973	1975	1977	1979	1981	1983	1985	1987	
Knoll Bay	258-553	8,000	0	200		15,000	9,500	16,000	6,000		850	6,943.8
Kiavak Lagoon	258-554	100		0	0	600	300	2,500	500			571.4
Kiavak Spit	258-555	25		0		50	0	0	200			45.8
Jap Bay	258-601	400			0	200	200	0	40	3,000		548.6
N Kaguyak	258-602	22,000	10,000	1,500	2,500	9,000	33,000	2,500	30,800	10,000	8,800	13,010.0
W Kaguyak	258-603	5,200	0	13,600	0	10,000	9,000	0	10,000	12,000	480	6,028.0
Seven Rivers	258-701	39,000	54,000	24,000	86,000	53,000	100,700	128,000	86,000	60,600	164,400	79,570.0
Geese Creek	258-702	8,000		0	0	9,000	8,000	10,600	4,000	5,200	8,580	5,931.1
Tundra Lakes	258-703					6,000	10,000	5,600	18,000	400		8,000.0
Sow Creek	258-704					0			800	0		266.7
No name	258-705							0		6		3.0
No name	258-706							10,000				10,000.0
	258-707											
Russian Harbor	258-801	17,000		600	0	4,500	1,200	800	0			3,442.9
Dolina Point	258-801A				20		0	0				6.7
No name	258-801B							3,400				3,400.0
N Beach	258-802				0	20	0			200		55.0
Whirlpool Pt	258-803				0	0	2		0	0		0.4
Grotecloss	258-803A		0		0	0	15					3.8
Camp Creek	258-804		0		0	90	0		0	0		15.0
Pyramid Creek	258-804A		0		0	0	0					0.0

-Continued-

Stream Name	Stream #	Year										Mean
		1969	1971	1973	1975	1977	1979	1981	1983	1985	1987	
Bend Creek	258-805		0		0	0	0		0	0		0.0
Ocean View	258-806				0	0	0		0	0		0.0
No name	258-807									13		13.0
Strip Creek	258-808				0	100	100	0	450			130.0
Grotegross	258-809				0		20		200			73.3
Passage Creek	258-810				0		700					350.0
Tugidak	258-811				0							0.0
No name	258-851								1,500	500		1,000.0
No name	258-852									40		40.0
No name	258-853									0	0	0.0
N Russian Hrbr	258-901								200	1,000		600.0
E Russian Hrbr	258-902								6,000	8,000		7,000.0
Kevin Creek	258-903								150	3,000	0	1,050.0
Reef Creek	258-904								0	0		0.0
Monashka	259-101	3,500	0	50	600	3,800	3,300	1,300	1,250	8,700	295	2,279.5
Azimuth Point	259-101A	300		500		200	400	2,500	650	2,800		1,050.0
Virginia Creek	259-101B					0						0.0
Pillar Creek	259-102	500	500	1,000	4,500	4,800	850	400	430	5,040	300	1,832.0
Mill Bay	259-103										0	0.0
Icon	259-104											
No name	259-105											

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Appendix B.1. (page 14 of 23)

Stream Name	Stream #	Year										Mean	
		1969	1971	1973	1975	1977	1979	1981	1983	1985	1987		
No name	259-201												
Buskin	259-211	66,500	7,900	26,350	22,000	54,000	61,000	88,000	53,000	166,688	27,892	57,333.0	
Sargents	259-221	3,000	2,000	1,000		300	1,400	1,400	300	4,000	300	1,522.2	
Russian	259-222	16,340	3,100	2,250	6,000	12,000	24,200	5,600	2,000	10,400	18,200	10,009.0	
Salonie	259-223	15,100	4,400	1,500	11,250	6,000	19,550	10,000	5,500	20,400	10,000	10,370.0	
Panamaroff	259-224								0	3,000		1,500.0	
American	259-231	52,000	18,900	11,300	0	51,900	45,300	54,000	71,000	141,000	112,800	55,820.0	
Horseshoe	259-232				0				0			0.0	
Salt	259-233		1,000		20	200	0	0	0	0	1,000	277.5	
No name	259-234							5,500				5,500.0	
No name	259-235									300	200	250.0	
Sid Olds	259-242	37,000	40,000	13,000	16,000	41,000	80,000	73,000	30,020	69,400	66,100	46,552.0	
Kalsin	259-243	5,000	300		400		1,100	0	0		0	971.4	
Franks	259-244					0			0	0	0	0.0	
Myrtle Creek	259-245								1,390	4,600	0	1,996.7	
No name	259-246									0	0	0.0	
Roslyn	259-251	13,000	4,000	600	5,600	4,200	11,500	1,500	2,800	7,800	12,000	6,300.0	
Twin	259-252	300		50	0	500	500	0	260	60	14,900	1,841.1	
Capelin	259-253				300			0	0	300	10	122.0	
Chiniak	259-254	4,000	1,500	200	1,300	2,700	4,000	650	3,000	10,500	9,950	3,780.0	

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Stream Name	Stream #	Year										Mean
		1969	1971	1973	1975	1977	1979	1981	1983	1985	1987	
Myrtle Creek	259-255	1,700	4,000	300	3,200	11,000	60	2,600		0	0	2,540.0
	259-307											
No name	259-362					125						125.0
Barabara	259-363	0		0	0	0	0	200	200	0	0	44.4
Goat	259-364	1,400		50		400	12,000	4,500	400	2,500	2,100	2,918.8
Kizhuyak	259-365	8,300	4,000	8,000	11,000	19,300	29,600	58,250	18,000	35,000	29,000	22,045.0
Pestchanie	259-366	1,500		300		150	16,500	4,300	600	1,600	4,700	3,706.3
Few Creek	259-367					4		120			1,400	508.0
Dovolno Point	259-368					73	2,700	20			50	710.8
More	259-369					250		0			200	150.0
Sheratin	259-371	11,200	6,400	4,000	12,000	18,000	38,000	20,500	18,000	40,900	15,000	18,400.0
Horse Creek	259-372						60	0	200		2,000	565.0
No name	259-373							20				20.0
Anton Larson	259-381					1,500	0	6,000	0		0	1,500.0
Red Cloud	259-382	4,700	2,300	1,800	2,650	3,500	16,200	4,000	2,800	6,600	3,780	4,833.0
Cow Creek	259-383	1,700	200	500	0	500	3,800	0	2,900		800	1,155.6
Neva Creek	259-391	1,500		500	400	300	8,600	20,000	5,500	7,400	2,000	5,133.3
Otmelopt	259-392	2,500		200	900	2,500	1,300	6,500	0	3,000		2,112.5
Seredhi Point	259-393	200		0	150	200	20	250	600	300	0	191.1
No name	259-394								700	5,400	1,900	2,666.7
Monk's Lagoon	259-395								0		900	450.0

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Appendix B.1. (page 16 of 23)

Stream Name	Stream #	Year										Mean
		1969	1971	1973	1975	1977	1979	1981	1983	1985	1987	
Soldier Bay	259-397									4,500		4,500.0
	259-398A											
	259-398B											
	259-399											
Sacramento	259-401	20,000	21,000	15,000	14,000	0	23,000	3,800	5,400	11,800	150	11,415.0
Twin Peak	259-402	10	0	0	0		0		120	0	0	16.3
Valley	259-403	0	60	100	100		0		20	2,400	0	335.0
Burton's	259-404	0	130	0	50		200		0	10	0	48.8
Barry's	259-405	0		0			0		0	0	0	0.0
Pasagshak Creek	259-410	2,100	7,000	2,900	12,000	100	14,000	4,100	3,800	6,600	12,000	6,460.0
Pasagshak River	259-411	10,200	1,500	0	260	100	5,000	2,000	400	14,500	2,000	3,596.0
Miam	259-412	4,000	3,000	1,100	12,000	11,900	71,000	15,380	17,500	40,000	22,500	19,838.0
Nose	259-413	0	0		300		0			10		62.0
Hurst Creek	259-414	20,000	30,000	8,300	7,700	33,000	17,000	6,050	3,500	1,500	11,100	13,815.0
No name	259-414A									50		50.0
Saltry Cove	259-415	85,000	57,000	25,000	46,000	144,000	68,000	57,000	39,000	28,400	39,687	58,908.7
Rough Creek	259-416	10,000	3,000	1,000	6,600		8,600	3,000	7,500	7,700	0	5,266.7
Wild Creek	259-417			0	20		10	0	500	400	0	132.9
	259-417A											
	259-418											
Hidden Basin	259-418A	100	0	100	0	0	0	1,000	3,000	9,000	0	1,320.0

-Continued-

Stream Name	Stream #	Year										Mean
		1969	1971	1973	1975	1977	1979	1981	1983	1985	1987	
Glottof Creek	259-4188	0	0	0	0	0	0	1,100	1,000	20	0	212.0
W Basin Creek	259-419	0		0	0	0	0	0	0	80	200	31.1
Short Slough	259-419A						445	0	0	250	0	139.0
Wet Creek	259-420				0			0				0.0
Finger	259-421	0		0	0		2,400	0	10	30		348.6
Goat Lake	259-422	5,000	5,000	2,000	4,000		7,800	5,500	9,000	7,200	630	5,125.6
Kiliuda Pass	259-423	2,100	2,000	0	6,000		3,000	500	4,000	2,000	1,700	2,366.7
Slope Creek	259-424A					6,200						6,200.0
Eagle Harbor	259-424	3,600	1,800	3,600	5,400	22,000	57,300	14,400	6,400	4,550	11,000	13,005.0
Buck Creek	259-425	600	0	0			800	0	300			283.3
Gull Point	259-426	0	0	100	0		500	0	0		75	84.4
Delta Creek	259-427			0			100	200	0	0	0	50.0
Gull Cape Cr	259-428	0	550	3,500		0	0	0	0	0		506.3
subtotal		602,790	338,590	216,040	359,990	700,542	1,008,462	931,815	652,085	971,072	679,849	710,170
Cape Douglas	262-101		0				200	50	100	900		250.0
Cape Douglas	262-102		0				600	0	300	0	0	150.0
Cape Douglas	262-103		0				0	30	50	2,200	0	380.0
Cape Douglas	262-104		0				0	0	0	0	0	0.0
Cape Douglas	262-105		0				0	0	0	0	0	0.0
Cape Douglas	262-106		0				4,000	0	500	0	0	750.0
Cape Douglas	262-106A									1,500		1,500.0

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Stream Name	Stream #	Year										Mean
		1969	1971	1973	1975	1977	1979	1981	1983	1985	1987	
Cape Douglas	262-107		0				0	0	0	1,200	0	200.0
Cape Douglas	262-108		50				300	0	0	600	0	158.3
Cape Douglas	262-109											
	262-110											
	262-111											
	262-113											
Swikshak	262-151	0	100	0	7,400	0	0	0	0	0	0	750.0
Monument	262-151A			0								0.0
Big River	262-152	70,000	15,000	15,000	11,000	40,000	25,000	40,000	11,000	25,000	22,000	27,400.0
3-Forks Creek	262-152A			0	0	500						166.7
Village	262-153	99,000	20,000	500	27,000	70,000	19,050	42,000	33,000	15,000	9,000	33,455.0
Lagoon Creek	262-153A			0	0	0						0.0
Melayna	262-153B					250						250.0
Chiniak	262-154	0	0	0	40	300	0	0	0	0	0	34.0
Ken's Creek	262-155				0	50				0	100	37.5
Joan's Creek	262-156				150	30						90.0
Larry's Creek	262-157				0	0						0.0
Middle Creek	262-158				0	0						0.0
Lake Creek	262-159				0	200						100.0
Ninagiak	262-201	25	0	0	0	2,000	600	0	200	200	3,000	602.5
Hook Creek	262-202	0	0	6,000	0	0	0	0	0	0	200	620.0

-Continued-

Stream Name	Stream #	Year										Mean
		1969	1971	1973	1975	1977	1979	1981	1983	1985	1987	
Serpent Creek	262-203	10,000	0	1,500	0	3,000	0	1,500	2,000	2,000	0	2,000.0
Hallo Creek	262-204	500	0	0	0	600	100	1,100	300	0	0	260.0
N Hallo Beach	262-205	2,000	1,000	500	2,500	3,500	6,000	11,000	450	7,700	3,400	3,805.0
	262-206											
	262-207											
W Devils Creek	262-253	0	0	0	0	0	0	50	0	1,700		194.4
Yugnak	262-254	20	100		0		0	0	20	300	0	55.0
NW Devil Creek	262-255	1,500	0	50	0	100		0	220	75		243.1
N Devil Creek	262-256	0	0	50	0	100		0	16	150		39.5
Kukak River	262-271	0	0	0	15,000	5,000	3,000	2,000	500	2,000	1,000	2,850.0
SW Kukak	262-272	0	0	0	0	6,000	300	500		900	0	855.6
	262-273											
Kaflia	262-301	0	0	0	0	3,600	0	0	0	0	0	360.0
Kaflia	262-302							0				0.0
Kuliak	262-351	0	0	0	0	5,000	3,000	6,000	2,600	2,500	600	1,970.0
Spruce Bay	262-352						6,000	0	0			2,000.0
Inner Missak	262-401	0	0	0	0	1,500	1,200	9,300	500	2,700	100	1,530.0
Missak Creek	262-402	3,000	100	400	4,200	10,500	5,000	14,000	2,000	3,000	0	4,220.0
Kinak Creek	262-451	13,000		500	34,000	55,000	55,000	89,000	45,000	45,000	6,500	38,111.1
W Hidden Harbor	262-452		200	800		0	3,000	200	0	0		600.0
No name	262-453							0	1,100	0		366.7

-Continued-

Stream Name	Stream #	Year										Mean	
		1969	1971	1973	1975	1977	1979	1981	1983	1985	1987		
No name	262-454							0					0.0
Geographic	262-501	3,000	500	1,000	0	15,000	21,000	51,200	4,500	16,500	14,000		12,670.0
Avalanche	262-502					200	0	6,000	200			700	1,420.0
	262-503												
	262-504												
	262-505												
Dakavak	262-551	18,000	1,000	3,000	29,000	76,000	77,000	31,000	8,000	17,000	18,000		27,800.0
Mt Pedmar	262-552						0	0	0	0	0		0.0
Katmai	262-601	0	0			0	0	0	0	0			0.0
Alagogshak	262-602	2,000	5,000	2,000	0	3,000	0	0	0		2,000		1,555.6
Short Kashvik	262-603	200	0	6,000	0	200	0	0	0	1,900	0		830.0
Long Kashvik	262-604	14,000	18,000	9,500	16,000	60,000	38,700	37,000	33,000	45,000	63,000		33,420.0
Wreckage	262-605					4,300	1,200		0	1,200	700		1,480.0
Skimpy	262-606							0			0		0.0
Big Alinchak	262-651	7,000	6,000	6,000	5,200	28,000	17,000	11,000	12,000	42,000	51,000		18,520.0
Little Alinchak	262-652	1,300	800	500	20	0	300	1,500	2,000	15,000	28,000		4,942.0
Moose Creek	262-653	1,200	2,500	500	10		250	5,100	2,800	7,600	18,000		4,217.8
Bear Bay Creek	262-654	3,300	5,000	2,500	2,000	9,000	0	0	0	2,000	1,100		2,490.0
No name	262-655		6,000				700	0			1,400		2,025.0
No name	262-656							0			600		300.0
No name	262-657										0		0.0

-Continued-

Stream Name	Stream #	Year										Mean
		1969	1971	1973	1975	1977	1979	1981	1983	1985	1987	
Helen Creek	262-701	250	500	300	450	2,000	500	2,000	2,200	7,000	5,400	2,060.0
Portage	262-702	4,300	2,000	3,000		7,000	12,000	14,000	6,800	16,000	31,000	10,677.8
Puale	262-702A	0	0	0	0	0	0	0	0	0	0	0.0
Teresa	262-703	0	0	0	120		0	0	0	0	0	13.3
Trail Creek	262-704	50	0	0	50	300	0	5,000	1,600	0	2,000	900.0
Katie Creek	262-705							0	1,200	2,000	4,200	1,850.0
Katie Creek	262-706											
Katie Creek	262-750		0		0		300	250				137.5
Oil Creek	262-751	4,000	2,500	5,000	2,200		5,700	15,000	3,100	31,000	13,000	9,055.6
Dry Bay	262-752	1,500	0	0	3,500		400	0	200	0	4,700	1,144.4
No name	262-753											
Jute Creek	262-801	600	1,000	300	80	1,500	1,200	500	800	1,200	2,600	978.0
Kanatak	262-802	16,000	6,000	2,000	3,000	10,500	40,000	50,000	6,500	14,000	21,000	16,900.0
Salmon Creek	262-803	0	100		0	200	200	0	0	150	0	72.2
	262-804										0	0.0
	262-805											
	262-850											
Big Creek	262-851	21,000	4,000	5,000	13,000	112,000	184,000	65,000	40,000	69,000	141,000	65,400.0
No name	262-851A										0	0.0
Des Moines	262-852	2,000	600	0	2,600	4,000	4,500	16,000	5,000	11,000	12,500	5,820.0
Pass Creek	262-853	3,800	0	0	200	600	500	2,500	6,000	4,200	8,200	2,600.0

-Continued-

Stream Name	Stream #	Year										Mean
		1969	1971	1973	1975	1977	1979	1981	1983	1985	1987	
Short Creek	262-854	500	0	0	0	300	100	20	50	2,800	8,600	1,237.0
Tiny Creek	262-854A					25						25.0
Spit Creek	262-855	0	0		4	0		0	15		0	2.7
Imuya	262-856	500	0	0	0		6,200	3,200	4,000	8,000	3,200	2,788.9
Cire Creek	262-856A						2,600		3,000	7,800	19,000	8,100.0
Kayakluit	262-856B						400		200	400	100	275.0
Alai	262-857	0	0	0	10	0	0	0	0			1.3
Kialaguik	262-858	0	5,000	0	8,700	0	2,000	0	0	0	5,000	2,070.0
Icy Peak	262-859	0	6,000		0	300	200		500	0		1,000.0
Slough Creek	262-859A					75	0		0		4,500	1,143.8
	262-860											
	262-861											
	262-862											
	262-863											
	262-864											
	262-865											
	262-866											
	262-868											

-Continued-

Stream Name	Stream #	Year										Mean	
		1969	1971	1973	1975	1977	1979	1981	1983	1985	1987		
No name	262-951					650							650.0
	262-952												

subtotal		303,545	109,050	71,900	187,434	542,380	549,300	533,000	243,521	437,375	530,400	372,927	

Totals		1,625,335	1,080,373	633,092	1,094,535	2,307,250	3,069,712	3,201,940	2,170,021	3,210,961	2,490,425	2,304,360	

- ^a Peak aerial escapement indices were taken from Kodiak Annual Management Reports 1969 through 1985 and the Kodiak Management stream survey database 1987 and 1989.
- ^b Escapement counts pre 1981 were deleted from the database due to additional pink spawning habitat created by fishpass construction in 1981.
- ^c In 1986 the Afognak River weir was moved downstream. The pre 1986 escapement counts were adjusted to make the data set comparable to the post 1986 escapement counts.

Appendix C.1. Work sheet for estimating the 1989 coho salmon escapement, catch, and run numbers for the Kodiak Management Area had there been a normal fishery without the oil spill.

System	# Coho Salmon By Year					
	1989	1988	1987	1986	1985	1984
Weirs ^a :						
Karluk	25,370	13,167	46,063	27,875	38,016	16,121
Red River	12,822	29,466	16,364	17,380	32,894	1,644
Dog Salmon	6,750	5,749	8,407	5,459	4,256	1,407
Upper Station	7,229	5,065	2,563	4,018	5,457	3,281
Akalura	4,182	6,358	2,016	3,186	5,023	-
Saltery	6,738	7,519	11,447	11,667	4,496	-
Buskin River	9,954	8,027	11,160	11,491	9,418	-
Litnik	16,347	11,323	15,543	5,119	14,860	7,828
Pauls Bay	7,984	5,752	5,456	9,510	9,633	4,365
Index Escap. ^b	97,376	92,426	119,019	95,705	124,053	44,376
Total Est. Escap. ^c	317,448	301,311	388,005	312,000	404,416	144,668
Total catch	2,599	301,836	192,540	168,690	284,151	230,000
Run	320,047	603,147	580,545	480,690	688,567	374,668
Exploitation Rate:		0.50	0.33	0.35	0.41	0.61

Mean exploitation rate for 1984-88 = 44.19%

Projected 1989 catch^d = 141,433

^a The weir counts of coho escapement include an estimate of fish passing after weir removal. The post-weir escapement components were calculated by the rate of escapement count change for the last few weeks each weir was operated. The Akalura 1985 coho escapement was determined using the 1986-89 mean escapement distribution. Missing 1984 counts were estimated using the 1985-89 mean escapement distribution.

^b The indexed escapement number is the sum of the coho escapement counted through nine weirs.

^c The total estimated escapement is the indexed escapement expanded by a factor of 3.26 which is based ADF&G work in 1986 (Holmes 1990).

^d The projected or estimated 1989 catch is based on the 1984-88 exploitation rate of 44.19%. A regression of the 1984-88 escapement and catch numbers was rejected due to a low R squared (.04).

Appendix C.2. Work sheet for estimating the 1989 chinook salmon escapement, catch, and run numbers for the Kodiak Management Area had there been a normal fishery without the oil spill.

Year	Chinook			Harvest Rate
	Escapement ^a	Catch	Run	
1979	14,445	1,905	16,350	0.1165
1980	5,853	529	6,382	0.0829
1981	15,655	1,418	17,073	0.0831
1982	10,773	1,238	12,011	0.1031
1983	27,445	3,839	31,284	0.1227
1984	14,411	4,657	19,068	0.2442
1985	13,877	4,970	18,847	0.2637
1986	11,050	4,381	15,431	0.2839
1987	23,744	4,612	28,356	0.1626
1988	35,027	22,374	57,401	0.3898
			mean harvest rate	0.1853
Actual 1989	26,077	106	26,183	
Est. 1989 w/o oil	21,333	4,850	26,183	0.1853

^aEscapement numbers based on weir counts.

^bThe estimated 1989 chinook harvest assumes a run harvest rate of 18.53% which is the average rate for 1979-88.

Appendix C.3. Work sheet for estimating the 1989 sockeye salmon escapement, catch, and run numbers for the Kodiak Management Area had there been a normal fishery without the oil spill.

Actual			Distribution if No Spill Occurred		
Escapement ^a	Catch	Run	Escapement ^b	Catch ^{c, d}	Run
3,170,482	1,289,536	4,460,018	1,931,000	2,529,018	4,460,018

^a The actual escapement is the sum of the weir escapement counts plus the peak escapement counts, for the sockeye systems without weirs, expanded by a factor of 2.0. The expansion factor is based on sockeye salmon escapement studies in the Susitna River drainage (Barrett et al. 1985) and Tustumena Lake system (Barrett 1973).

^b The mid point of the index escapement goal is 1,749,250 sockeye salmon. A total of 181,750 fish in this goal represent peak escapement survey counts, while the balance are weir counts. The mid point of the index escapement goal corresponds to a total escapement of 1,931,000 fish using a 2.0 expansion factor on the peak survey count component.

^c Assuming that the escapement goal would have been met, the balance of the 1989 sockeye salmon run would have then been harvested.

^d The pre-26 July catch for the Cape Igvak Section is estimated at 6,100 sockeye salmon with 80% Chignik fish and 20% Kodiak fish. (In 1989 the Chignik early run was weak, therefore only a 24hr. fishing period was projected for the Cape Igvak pre-26 July fishery). The catch number does not include the estimated 4,880 Chignik River fish which would have been caught by Kodiak fishermen in the Cape Igvak Section pre-26 July.

Appendix C.4. Work sheet for estimating total pink salmon escapement, catch, and run numbers for non-hatchery production in the Kodiak Management Area, 1989.

Actual			Distribution if No Spill Occurred		
Escapement ^a	Catch ^b	Run	Escapement ^c	Catch ^{d, e}	Run
21,084,539	183,236	21,267,775	4,670,506	16,597,269	21,267,775

^aIn 1989 an estimated 93.67% of the actual escapement was counted which is based on the average odd-year distribution of pink salmon escapement from 1969 - 1987 for Kodiak Management Area streams. Except for the weir counts the pink salmon escapement estimate is based on the Johnson and Barrett (1988) model which incorporated a stream life value of 8.44 days (1989 Department study) for Afognak District streams, and a stream life value of 15.0 days for the balance of the Kodiak Management Area. The 15.0 day stream life value has been used in the management area since 1986.

^bKitoy Bay catch was 6,437,666 pink salmon, while 183,236 pink salmon were caught else where.

^cThe odd-year escap. goal is 2,335,253 to 7,005,759 fish with a mid point of 4,670,506 fish.

^dNumbers used in the calculation of the estimated catch:

21,084,539 Total escap. inclusive of unsurveyed systems
 19,749,977 total escap for surveyed systems
 183,236 catch not including Kitoy Bay.
 19,933,213 run less unsurveyed systems
 4,670,506 mid pt. escap. goal for all KMA systems
 21,267,775 Total KMA pink run not including Kitoy Bay catch
 16,597,269 Total available catch w/o oil not including Kitoy Bay catch

^eThe projected catch does not include the Kitoy Bay harvest of 6,437,666 pink salmon.

Appendix C.5. Work sheet for estimating the 1989 chum salmon escapement, catch, and run numbers for the Kodiak Management Area had there been a normal fishery without the oil spill.

Actual			Distribution if No Spill Occurred		
Escapement ^a	Catch	Run	Escapement	Catch ^b	Run
1,530,148	19,972	1,550,120	784,440	765,680	1,550,120

^a Total chum escapement through 16 weirs was 5,583 fish, while the estimated total escapement to 319 streams where escapement was counted by aerial and ground surveys was 1,524,317 fish.

^b The total KMA chum escapement goal is 784,440 fish for the minimum and 2,353,321 fish for the desired level. The minimum escapement goal would likely be reached in year with a record high pink run which was the case in 1989.

CHUM SALMON KODIAK					
Year	Catch	Indexed Escap. ^a	Total Escap. ^b	Run	Harvest Rate
1977	1,072,313	742,384	982,850	2,055,163	0.5218
1978	814,345	483,000	639,449	1,453,794	0.5602
1979	358,400	607,000	803,614	1,162,014	0.3084
1980	1,075,557	830,000	1,098,846	2,174,403	0.4946
1981	1,345,318	742,000	982,342	2,327,660	0.5780
1982	1,266,187	1,023,927	1,355,588	2,621,775	0.4830
1983	1,085,165	824,954	1,092,165	2,177,330	0.4984
1984	649,092	682,936	904,146	1,553,238	0.4179
1985	430,757	723,390	957,704	1,388,461	0.3102
1986	1,134,558	655,817	1,165,861	2,300,419	0.4932
1987	681,982	641,579	849,393	1,531,375	0.4453
1988	1,426,410	720,000	953,216	2,379,626	0.5994
Actual 1989	19,972	1,380,581	1,530,148	1,550,120	
Est. 1989	765,680	707,764	784,440	1,550,120	0.4939

^a Indexed escapement is the sum of the chum peak aerial escapement counts and weir counts for 78 streams.

^b Total escapement is the index escapement expanded by a factor of 1.324 for years 1977-88 except 1986. The factor of 1.324 represents the combined 1986 and 1989 estimated total escapement divided by the combined indexed escapement for the same years. The estimated total 1986 escapement number is from Holmes (1990).

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